

REVIEWS: The New Systems Are Here!

PCNOVICE®

PCNOVICE

PERSONAL COMPUTERS IN PLAIN ENGLISH



GUIDE SURVIVAL! 97

How To *Increase* Your Productivity Now!

- **New Technology** — *What's Hot And What's Hype* p.23
- **Internet Access** — *Are You Spending Too Much?* p.78
- **Alternative Keyboards** — *Are They Better For You?* p.58
- **Family vs. Business PCs** — *What Is The Difference?* p.55
- **Portable Protection** — *Better Safe Than Sorry* p.76

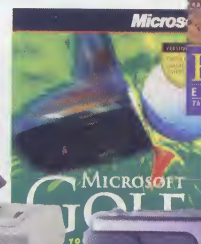
50 Great Holiday Gift Ideas

92 / 8



\$3.95

December 1996



The Quality You Need At The Price You Want.

**Works with
Windows 95!**

Only \$399!

ScanMaker E3

- 24-bit / single-pass
- 300 x 600 optical resolution
- 2400 dpi maximum resolution
- Legal-size scanning area
- ScanWizard™ scanning software
- OCR software for scanning text
- Image-editing software

GO WITH THE SCANNER FROM THE SCANNER EXPERTS.

How To Choose the Best Scanner & The Best Scanner Maker.

In the market for a scanner? There's a lot of low-priced scanners available these days. But if you want a reliable desktop scanner, made by a company with the longest history of making desktop scanners and with a reputation for superb image quality year after year — then make your scanner a Microtek!

Introducing A Single-Pass Color Flatbed Scanner For Only \$399!

Starting at just \$399, the new ScanMaker® E3 captures images at resolutions up to 2400 dpi in extremely life-like color. The ScanMaker E3 includes Microtek's easy-to-use ScanWizard™ scanner controller software for Windows or Macintosh. ScanWizard lets you enhance, add special effects to images — even before you scan them!

The ScanMaker E3 also includes Caere's OmniPage

Limited Edition OCR software for scanning pages of text, Ulead's ImagePals 2 Go and PhotoImpact SE image editing software for Windows, or MicroFrontier's Color It! image-editing and paint software for Macintosh.

Also Introducing A 30-bit High Resolution, Single-Pass Color Flatbed For Only \$599!

Need higher resolution? Ask for Microtek's ScanMaker® E6 which starts at just \$599!

With its 30-bit depth and 4800 dpi maximum resolution the ScanMaker E6 renders images with increased detail in highlights and shadows. The ScanMaker E6 includes ScanWizard, OCR and image-editing software for Windows or Macintosh. And both the ScanMaker E3 and E6 work with Windows 95.

For Home. For Office. High Quality Scanners For A Whole Lot Less.

So, whether you need a scanner for the home, for the office, for your kids or for your company ask for Microtek, the company that virtually invented desktop scanning.

For the location of your nearest authorized Microtek reseller or for more information, call 1-800-654-4160 or use our convenient Auto Tech fax-back line at (310) 297-5101. Or check out our Web site at <http://www.mteklab.com>

MICROTEK
Better Images Through Innovation.



MacWEEK (August 7, 1995)

All prices mentioned are suggested street prices. The following are trademarks or registered trademarks of their respective companies: Microtek, ScanMaker, ScanWizard of Microtek Lab, Inc., Windows of Microsoft Corporation, Macintosh of Apple Computer, Inc., ImagePals 2 Go and PhotoImpact of Ulead Systems, Inc., Color It! of MicroFrontier, Inc., OmniPage Limited Edition of Caere Corporation. All other trademarks or registered trademarks are the property of their respective holders. Prices, specifications and software bundles are subject to change without notice. E3E6EUVW59GCS

FOCUS ON: Survival Guide



GENERAL COMPUTING

23 Next Year's Tech Overload:

A SURVIVAL GUIDE

Making sense of all the new PC developments in the coming year just got a little easier with our analysis.

PC OPERATING INSTRUCTIONS

13 Using The PATH Command

A PATH statement can save you the trouble of remembering which directories your favorite programs are located in.



WINDOWS COMPUTING

20 Which Windows?

Various versions of the wildly popular Microsoft Windows have specific strengths. Here's how to pick the best one for you.

GENERAL COMPUTING

28 Holiday Gift Guide

The Christmas present you're looking for might be among our 50 favorite products from the last year.



COMPUTING BASICS

46 Computing's Seven Deadly Sins

A SURVIVAL GUIDE

We apply the Seven Deadly Sins to the world of computers and come up with some common sense tips for all users.

48 TSRs: Multitasking The DOS Way



Handy terminate-and-stay-resident programs lurk out of sight until you call them into action—or until they cause a problem.

FAMILY COMPUTING

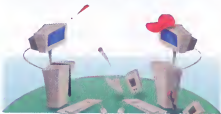
50 Your Guide To The Holiday Consumer PCs

A SURVIVAL GUIDE

Shopping for a new PC can be a harrowing experience with all the great systems and new companies entering the market. We unveil our favorites and help you find your best system.

WORKING AT HOME

55 Choosing Between Business & Family PCs



On top of all the other marketing jargon, now you must decide whether you need a "home" or "business" machine. Consider these facts when making the choice.

AT THE OFFICE

58 Input Devices: Can The Right Ones Prevent Pain?

A SURVIVAL GUIDE

Healthy computing may depend on how you work more than how your keyboard is designed.

14 Installing Device Drivers In Windows

Adding drivers to your PC is as simple as following a few steps. We'll walk you through the process of installing drivers for several types of peripherals.

16 Basic Training

Topics covered this month: Games, help, deleting files and directories, passwords, and screen savers.

QUICK STUDIES



60 WordPerfect 6.1: Taking A Different View

61 Lotus 1-2-3 5.0 For Windows: Freezing Rows & Columns

62 PageMaker 6.01: Using Tabs

64 Microsoft Word 6.0 : Navigational Aides

66 Word Pro 96: Using The WordPerfect SwitchKit

67 Quattro Pro 6.0: Working With Text

68 Quicken Deluxe 5.0: Printing Checks

70 Microsoft Excel 5.0: Using Financial Formulas

71 Microsoft PowerPoint 7.0: Using AutoShapes

PLUGGED IN

78 Get The Most 'Net For Your Dollar



Are you paying too much to access the 'Net? Learn to find the cheapest Internet service providers and minimize online expenses.

80 Find It Online

Nutrition ...
holidays ... toys ...
television ...
Christmas trees ...
Santa Claus ...
shareware ...
science.



TIDBITS

86 How To Safely Move Your PC



Following some simple rules can help prevent bad results when moving your computer.

- 4 Technology News
- 8 Novice Notes
- 63 Learning Series Ad
- 88 Q&A
- 92 Action Editor
- 93 1996 Year-end Article Index
- 98 Back Issues
- 99 Glossary Of Terms
- 100 Editorial Comment

COMING NEXT MONTH ...

- ✓ Programs that organize your finances
- ✓ New Year's resolutions for better computing
- ✓ Finding the best battery for portables

BEYOND THE BASICS

72 Learn The Language Of The Web: HTML, Part III



Our final installment explains how to use graphics wisely and help readers write back to you.

MOBILE COMPUTING

76 Protect Your Investment With A Case For Your Portable



Portable PCs are an expensive investment. Protecting that investment gets easier with a good carrying case.

YOUR OLD PC

82 Changing The PC's Battery

Maintaining your computer's battery (yes, it does have one) can prevent the loss of vital system data.

EDITORIAL STAFF Ronald D. Kobler • Whitney Pouts • Juliet Oseka • Trevor Meers • Robert Fraass • Sharon Loudon • Cindy Krushenitsky • Diana McLean • Jeff Dodd • Elizabeth Panska • Tom Mainelli • Joel Strauch • Sarah Scalet • Erin Duncan • Lissa Wiebers **SUBSCRIPTION RENEWALS & CUSTOMER SERVICE** Terrence Daly • Connie Beatty • James Berger • Matt Bolling • Patrick Kean • Gary Pohmeier • Carisa Riedmiller • Jeff Stone • Suresh Urfing • Charmaine Vondra • Rene Watson **ART AND DESIGN** Lesa Scarborough • Rebecca M. Toof • Ingrid Minchov • Fred Schneider • Ted Larsen • Lisa Block • Sadie Belle Theilen • Dave Flala • Lori Garrison • Jason Coder • Chad Gleason • Matt Morrow • Bret Gottschall **CIRCULATION DEVELOPMENT** Kim Homes • Shannon Vandeweghe • Natalie Sime • Michael Wirth • Bethany Bergmeyer • Bruce Doll **NEWSSTAND** Mark Peery • Garth Llanemann • Jeff Privat • Jennifer L. Uher • Chris Blaine **ADVERTISING SALES** Debbie Butt • Grant Ossenkop • Brad Bryan

PEED CORPORATION President • Thomas J. Peed Executive Vice President • Rhonda Peed Vice President • Mitchell W. Schainost Vice President • Dave Steen

Copyright 1996 by Peed Corporation. All rights reserved. Reproduction of material appearing in "PC Novice" is strictly prohibited without written permission. Printed in the U.S.A. PC Novice (ISSN 1052-1186) is published monthly for \$29 per year by Peed Corporation, 120 West Harvest Drive, P.O. Box 85380, Lincoln, NE 68501. Subscriber Services: 800-424-7900. Periodicals postage paid at Lincoln, NE. POSTMASTER: Send address changes to PC Novice, P.O. Box 85380, Lincoln, NE 68501.



Subscriber Service Information:

Advertising Staff:
(800) 848-1478

For Subscription Information Or Service:
(800) 424-7900
105015.1302@compuserve.com

To Order Back Issues/
Reference Binders:
(800) 367-7333

Authorization For Reprints:
(800) 334-7458

Editorial Staff:
(800) 544-1264

Staff Hours:
8 a.m. - 6 p.m. CST Mon.-Fri.

FAX: (402) 479-2104

Mailing Address:
120 W. Harvest Drive
Lincoln, NE 68521

E-mail Address:
74644.3017@compuserve.com

Step up to the next level of computing power: the Packard Bell Platinum[™] computers. With faster Intel[®] Pentium[®] processors, more memory and larger hard drives than ever before, they'll take you to the top of the charts.

More storage Hard disk drives from 1.2 GB to 2.0 GB (varies by

28.8 Kbps modem Surf the Internet at top speed. You even get free trial subscriptions to Packard Bell Direct Internet Access and the top three online services.

MPEG-1 Full motion, full blast! Now you're ready to play the latest MPEG games and video CD movies.

6X-speed CD-ROM Search that coast-to-coast phone book CD faster

Packard Bell Navigator[™] Turns your computer into a virtual home, with features organized into convenient "rooms." And parents can declare certain software "off limits" to their children.

VoiceView[®] TalkShop[™] Talk and send data in the same phone call. Now your modem game opponents can hear you laugh—before you blow them away.

Free on-site service in your home or office for one full year.

Packard Bell Platinum Pro[™]
The Best Of The Best

Want the ultimate in Packard Bell power? Look for the Packard Bell Platinum Pro[™] series. You'll find all the great features of Packard Bell Platinum[™], with 24 MB of memory.

Look for Packard Bell Platinum[™] and Platinum Pro[™] systems at your authorized Packard Bell retailer.

Congratulations. You've just gone Platinum.

model). Go ahead, buy that new 12 MB action game. You've got plenty of room.

More speed Choose from the fastest Intel[®] Pentium[®] processors, from 133 MHz to a pulse-pounding 166 MHz. Fast enough for you?

More memory Most Packard Bell Platinum[™] models have 16 MB of RAM. With that much memory, Windows[®] 95 doesn't just run—it flies.

than you can say "four-one-one." (most models)

SRS[®] 3-D Amphitheater Stereo[™]

Looks like two speakers. Sounds like a room full. You've got to hear the difference to believe it.

Fast Media[®] Remote Control

Run your computer from across the room. Change volume, check phone messages, even point and click the mouse.



Packard Bell[®]



Specifications subject to change without notice. Monitor available separately. Some applications mentioned are available separately. SRS features require stereo sound source. Windows is a registered trademark of Microsoft Corporation. Intel, Pentium, and the Intel Inside logo are registered trademarks of Intel Corporation. SRS is a registered trademark of SRS Labs, Inc. Fast Media and Navigator are trademarks, and Packard Bell is a registered trademark of Packard Bell Electronics, Inc. © 1996 Packard Bell Electronics. All rights reserved.

TECHNOLOGY NEWS

Compiled by Cindy Krushenlsky from AP and staff reports

Hacking Into The CIA

Some unhappy Swedish hackers broke into the Central Intelligence Agency's home page on the Internet this fall, changing the stated name of the page's creator to the "Central Stupidity Agency."

The saboteurs, aged 16 to 20, had been caught in 1991 for hacking in another incident, but the trial began just this fall. Angry over the court case in their country, they "revised" the CIA home page, dubbing themselves "Power Through Resistance." In addition to slamming the Swedish prosecutor in the case, the altered site also included links to various sex, music, and Scandinavian hacker sites, the Norwegian news agency NTB reported.

The altered page was up for only about 12 hours before the CIA took the server down to repair the damage. However, CIA spokesman Rick Oborn said that there was never any danger to national security. "This is a separate system not connected to any CIA internal files. There is no way you can enter CIA internal files through the system." Such attacks on home pages are common. A month earlier, anonymous hackers changed the opening page of the U.S. Department of Justice's site to read "U.S. Department of Injustice." ■

Monopoly On Internet Avenue?



Microsoft is once again under the Justice Department's microscope; this time, it's to determine whether the company is monopolizing the Internet market by not playing fair with its Internet browser competitor, Netscape. But as the Justice Department reviews the case, it also must resolve a tough question: Can the software company monopolize a market in which its product, *Internet Explorer*, is a distant second?

If the investigation broadens into a court battle, the focus would probably be on the issue of whether Microsoft can use its dominance in one segment of the software business to take over another. Netscape complained to the government earlier this year that Microsoft was using its dominance in operating systems to force personal computer makers to pre-install its Internet program on their machines instead of the *Netscape Navigator* browser.

The Justice Department's antitrust division has had Microsoft's business practices under scrutiny since 1993. In 1994, Microsoft entered a consent decree with the agency in which it agreed to cease its discounting practices related to the MS-DOS and Windows operating systems. However, Microsoft's products run the basic functions of nearly 90% of PCs. This request for information is the first by the Justice Department since summer 1995, when it explored the company's plan to start an online network.

If a court finds that Microsoft violated the 1994 agreement with its Internet products and sales tactics, the Justice Department could seek monetary penalties and other restraints. Although this

kind of case is unprecedented, there will be a lot at stake. Internet browsing programs are reshaping the way people use computers, eliminating many of the differences between working with data inside one local PC and one that could be located halfway around the world. ■

An Overcrowded Infohighway

With so many users going online and merging onto the Internet, overcrowding has become a real concern. While there's no way to curb the growth, some manufacturers propose to address the problem through bandwidth-conserving technology. Such technology exists, called IP Multicast, making transmissions more efficient to multiple recipients.

It works differently from traditional bandwidth-hungry "unicasts," which create a separate point-to-point data stream between the sender and each receiver, or from broadcasts, which send data streams to everyone on a network. Multicast sends a single stream of data that can be accessed by any recipient desiring the information.

Numerous vendors now are jointly promoting the IP Multicast Initiative for the Internet and corporate intranets, including Hewlett-Packard, Intel, Microsoft, Netscape, Silicon Graphics, and Sun Microsystems. The technology can be handled by much of the interworkings of the Internet and has begun to undergo field trials by several Internet service providers. ■

In The Statehouse



Prying secrets from federal bureaucrats has depended for 30 years on a law written in the age of carbon paper. This fall, the bureaucrats were given a nudge toward the electronic age.

Congress has decided to bring the Freedom of Information Act up-to-date. The new act prods federal agencies to share their data electronically when that's what the requester wants. Why could this be important? Consider some requests in which agencies provided the requested information on lists of paper—yards and yards of paper.

Now the bill would compel agencies, which receive about 600,000 FOIA requests a year, to release information in the format requested, whether it be on computer diskettes, CD-ROM, or through the Internet. The bill would also tackle "the mother of all complaints" against the FOIA, the often ludicrous amount of time it takes for a response. FOIA requests answered by the FBI in 1995 had been pending an average of 923 days. However, some say the bill is not necessarily revolutionary; it just gives the signal to government agencies that they need to shape up. ■

TECHNOLOGY NEWS

In Due Process



Packard Bell has agreed to label computers and monitors that contain used components as part of a settlement involving 22 states. A suit alleged that Packard Bell was selling PC parts from previously sold computers and promoting the systems as new. Although the company admitted no wrongdoing, the computer maker agreed to begin labeling computer cartons with a notice explaining the use of recycled parts starting Jan. 1, 1997. The company also must provide materials for display at stores that outline its practice of using previously sold parts, and Packard Bell must cover any used component contained in equipment sold as new under its new-product warranty. As part of the settlement, Packard Bell also will pay \$1.54 million to cover investigative costs, with each of the 22 states receiving \$70,000. ■

Sega Surfing

The new \$500 Internet box computers just got some more competition. Now you can turn your Sega Saturn game player into a Web browser. PlanetWeb Inc. (408/982-4688) has developed software that will be bundled with the Sega Saturn Net Link, a plug-in modem for the Sega Saturn.

With PlanetWeb's product, Internet pages are displayed on a connected television. This has been a problem in the past, as Internet text can look blurry with a lot of flicker on a television set. But the Net Link has special built-in software that the company claims smoothes pictures and makes text more readable. Net Link also comes with electronic mail (E-mail) capabilities and parental control features.

The package should be available this winter for about \$200. Considering it's only another \$200 to buy the Sega Saturn, that makes some stiff competition for the Internet box companies. ■

Class Of '98



What will computers be like two years from now? Most consumers anticipate that PC makers will continually increase speeds, lower prices, and add new options, but what's to come may make consumers broaden their perceptions of computers altogether.

PCs already are performing more tasks. Gateway 2000's Destination systems include 31-inch monitors that also can serve as televisions. Acer includes phones with its newest models, while Packard Bell systems let you control a television option or the CD player with a push of a button. (See "Your Guide To The Holiday Consumer PCs" in this issue.) Industry authorities predict systems

will continue this trend toward specialization, designed to do one thing well.

Analysts also expect systems to take on new colors and designs. Along with the basic beige, today's PCs are available in black, green, and purple. In the next few years, you may see models, for instance, trimmed in wood. Laptops may come with handles molded into the systems for better portability, and more business monitors may be replaced with sleek, flat-panel screens because they use less energy and require less cooling.

And you'll get a lot more PC for the money. Systems in the \$2,000 range in 1998 will likely be powered by Pentium Pro or PowerPC chips running around 300 megahertz (MHz), with the most expensive models running at about 450MHz. By 1998, hard drives will typically hold three gigabytes (GB) to 4GB of data. CD-ROM drives will presumably be replaced by Digital Video Disc, or DVD, drives in which discs can hold seven to 14 times as much data.

Modem speeds, which have accelerated from 9,600 bits per second (bps) two years ago to today's 33.6 Kilobits per second (Kbps), are not expected to experience the same kind of jump by 1998, simply because of the physical limits of telephone lines. However, Rockwell Semiconductor has introduced a new 56Kbps analog modem technology that takes advantage of digital phone connections offered by Internet service providers, enabling more bandwidth for Internet and telecommunication connections over ordinary phone lines. Several modem companies have announced they will produce such modems when Rockwell releases the 56Kbps modem chips, which should be available next year. ■

Tuning Into The Internet

The Road Runner began speeding onto Ohio television sets this fall, but Wile E. Coyote was nowhere to be found. This Road Runner is an Internet access service that lets users cruise the Internet through the existing cable television system and a cable modem.

After all the trials and tests, Time Warner's service is finally in place. Users can get unlimited Internet access for \$39.95, plus network storage space for a personal World Wide Web page and a collection of Time Warner information services. While the price is about twice as much as average Internet service providers might charge, the use of the coaxial/fiber-optic cable system will provide connections more than 100 times faster than ordinary telephone lines.

More than 2,000 subscribers were on a waiting list for the service when it began in the northeast Ohio area. Time Warner also planned to expand the service into Portland, Maine, this year and then into San Diego in early 1997. ■

Digital Dissidents

If you think there's a problem with freedom of information in the United States, check out what's happening in China. The Chinese government is censoring the Internet by blocking World Wide Web

TECHNOLOGY NEWS

sites of U.S. news media, dissidents, and other groups Beijing deems too politically sensitive.

Beijing government officials earlier this year ordered all Internet servers in China be routed through the Ministry of Posts and Telecommunications, making it relatively easy for the government to prevent Chinese Internet users from connecting to certain Web sites. Once officials decide a site should be banned, routers can be programmed to deny information coming from that site. More than 100,000 World Wide Web sites currently have been blocked, including newspapers such as *The Los Angeles Times* and *The Wall Street Journal*, as well as home pages of groups that monitor human rights abuses in China, such as the Tibet Information Network and Amnesty International. China is also cutting off politically sensitive sites, such as the Taiwan Government Information Office, and questionable sites such as *Playboy's*.

The government announced that China's laws against pornography, social disturbances, and breaches of state security apply on the Internet. Germany and Singapore also have blocked Internet users from viewing pornographic and other banned sites, but China's restrictions appear broader. The Singapore information minister has said the government will only censor a few dozen sites, and will instead focus on targeting producers and distributors of pornography in Singapore.

Of course, China tightly controls all information. Newspapers and television reports are controlled by the state. The new restrictions are just the latest way China attempts to control information entering the country and keep out criticism of the government. ■

Electronic Postmarks



"Snail mail" is looking for a way to keep up in an electronic world of instantaneous communication. The U.S. Postal

Service is working on a program in which customers could mail documents electronically through the post office, ensuring the documents would arrive securely and intact.

The Internet's growth has led to an explosive increase in E-mail use as more people and businesses have computers, but copies of contracts and other business documents still must be sent on paper for legal purposes. The new system could change that, permitting contracts, government applications, financial documents, and other items to be sent electronically with the post office providing proof they were sent and guaranteeing the accuracy of the copies. The agency also could provide an archive service, maintaining copies of documents if proof were needed of what was sent and when.

Unfortunately, the system won't be as simple as you might think. Say you want to send E-mail to a bank, and you need to prove it was sent by a certain date. The message might be sent from an online service, such as America Online, to the bank, via a post office computer. The post office computer would receive the message and stamp it with an electronic postmark before passing it along to the bank. For secret documents, it gets more complex with an encoding system requiring software that would be sold commercially.

A test will hopefully determine a reasonable price for the service, get customer feedback, and determine what features work best. If all goes well, the system could become widely available sometime next year. ■

Tech Shorts



Characters in the online virtual world are getting a bigger stomping ground. An open standard for online virtual worlds now allows avatars, or icons representing users in these chat domains, to move among virtual worlds and keep the same three-dimensional look and identity. The new Universal Avatar standard would make it possible for users to create avatar behaviors for different moods and actions or virtual pets to follow avatars. It might also allow information to be attached to an avatar that is searchable through Internet search engines by other users looking for avatars with similar interests.

Although "smart cards" may not yet be prevalent in wallets around the country, next year you may not leave home without one. Microsoft is working with companies such as Hewlett-Packard, France's Groupe Bull, Germany's Siemens AG, and Schlumberger Ltd. to integrate smart cards with PCs. Smart cards are another way to keep cash on hand; you purchase an amount of credit, and the card stores the money amount on a chip, electronically deducting for purchases. Imagine buying a new software game via the Internet by plugging a smart card into a slot on the side of your computer. Currently, the companies are developing technical standards for smart cards, smart-card readers, and PCs. Microsoft hopes to incorporate support for smart cards into its Windows operating system and Internet products and provide preliminary releases of key components to developers by the end of this year.

If you consider the Internet a faceless, virtual world of scam artists, now you've got a place to turn for guidance. The Better Business Bureau has an online site at <http://www.bbbonline.org> dedicated to online business. It's a place you can identify online businesses that have agreed "to adhere to truthful and accurate advertising claims" and resolve to fairly take care of any complaints that arise. The companies also must be in business a minimum of six months and provide a tangible street address and telephone number that is verified by the BBB. Companies that meet the BBB's standards can display an encrypted BBBOnline seal in their online advertising and will continually be monitored to keep that stamp of approval. Through the seal, users can link to a BBB reliability report on the company. The site is expected to be fully operational in the first quarter of 1997 and has been funded initially by sponsor companies such as AT&T, Eastman Kodak, GTE, Hewlett-Packard, Netscape, Sony, and Visa. ■

Go Spot Go Mobile Dog Wash
Steve Jordan, Chief Dog Washer

Things To Do Today:

- e-mail Flea Flee shampoo order
- fax designer new ad copy
- schedule follow-up appt. for dog bite
- research new trucks on the Web
- e-mail fan letter to Eddie c/o Frasier
- fax tax man/lattach P&L spreadsheet
- page Mr. Fung re: Hootie's flea dip
- vacuum dog hair off keyboard



(pictured here, "Rufus")

**Call now
to try
it free**
(or buy it for just \$49.)

How you use our free software is your own business.

Nobody promised running a small business would be a dog's life. But it sure can be a lot more efficient, affordable and fun when you get a risk-free 30-day trial of the new Magic Cap® for Windows® 95 software.

This easy-to-use communications software lets you use your PC to access America Online® or an Internet service provider to send messages to anyone with an e-mail address, browse the World Wide Web with the Microsoft® Internet Explorer, and fire off faxes at the click of a button.



Get a full working version risk-free
for 30 days. Call toll-free,
1 (888) 239-4824
and ask for offer 15122.

Magic Cap for Windows can instantly sort, file and organize your messages, keep track of addresses and phone numbers, schedule meetings and confirm appointments. About the only thing it can't do is fetch your slippers — but hey, when do you have time to relax anyway?



General Magic

* Due to a rapid depletion of (800) numbers, (888) is now an official toll-free prefix. A mysterious charge to Plains will not appear on your phone bill. Your call and your 30-day software trial are absolutely free. Limited-time offer © 1996 1996 General Magic, Inc. All rights reserved. General Magic, the General Magic logo and Magic Cap are registered trademarks of General Magic, Inc. Microsoft and Windows are registered trademarks in the United States and other countries of Microsoft Corporation. America Online is a registered trademark of America Online, Inc. All other trademarks are property of their respective owners.

A Computerized Christmas

You might not have rodents scurrying across your floor this winter, but these seasonal applications ensure that there will be at least one mouse—a computer mouse—stirring in your home this holiday season. From toddlers to teen-agers, here are three Christmas programs sure to please the children in your home.

Christmas In ComfyLand.

Christmas In ComfyLand, a holiday frolic through the Christmas season, will delight the youngest PC audience. Children can follow Snailly the snail, Jumpy the dog, Buddy the bear, Feely the elephant, and Comfy the little boy as they prepare for the holidays in ComfyLand. The program also teaches children about colors, sounds, and the weather. Most importantly, *Christmas In ComfyLand* encourages a familiarity with the family PC by giving young children hands-on access to the computer.

You must have the Comfy Keyboard in order to use the program. This keyboard, which was designed for small hands, uses multi-colored, multishaped buttons; a toy telephone; and a roller-bar to control the action on-screen.

For More Information:

Comfy
Price: \$29.95 (Comfy Keyboard retails for \$129)
Target ages: 2 to 6
(800) 992-6639 (212) 599-2000

The Night Before Christmas Holiday Crafts & Activity Center. 'Twas the month before Christmas and all through the house, the children were whining because they had nothing to do. Then Mom in her kerchief and

Pop in his cap popped this dandy application into the PC, and it mollified the kids.

Clement Moore's classic Christmas poem, "The Night Before Christmas," comes alive in *The Night Before Christmas Holiday Crafts & Activity Center*. Children can hear the poem read to them or guide themselves through an interactive version of the popular Christmas tale. The program also allows youngsters to build a snowman, decorate a Christmas tree, or send a letter to Santa Claus. They can obtain recipes for Christmas cookies as well.

For More Information:

Bell-Ford Entertainment
Price: \$19.95
Target ages: 3 to 10
(888) 667-2682 (707) 778-7987
<http://www.OneNorthPole.com>



PrintPaks' Holiday Ornaments Kit. This year, make your own decorations for the Christmas tree. No, we're not talking about popcorn strings and ceramic angels. *PrintPaks' Holiday Ornament Kit* lets you create decorative ornaments for your tannenbaum this Christmas.

Kids can use the built-in paint utility to draw and paint an ornament they design themselves, or they can import their favorite images or photographs to decorate an ornament. The Holiday Ornament Kit also includes nearly 50 color images that depict

traditional Christmas and Hanukkah scenes.

After printing the images on a color printer, the kids just need to cut out the pictures, construct the ornaments from the materials included with the software, and hang them on the tree.

For More Information:

PrintPaks Inc.
Price: \$19.95 (\$9.95 for refill materials)
Target ages: 5 and up
(800) 774-6860 (503) 295-6564
<http://www.printpaks.com> ■



The Survey Says . . .

As the sun sets on 1996, we'd like to share some of the more interesting factoids we encountered this year . . .

- Despite some of the negative publicity they receive, shoot-'em-up games are the favorite among 80% of PC game players. This seems even more surprising when you consider that 36% of game players are older than 25.—*From the 1996 SIMBA Game Player Survey.*
- Sales of CD-ROM drives have increased from 2.5 million drives in 1992 to more than 50 million in 1996.—*From the 1996 DISK/REND Report.*
- Schools spent more than \$1.25 billion on electronic media in 1996, up from \$1.09 billion in 1995. Software sales accounted for nearly \$740 million of this year's total.—*From SIMBA Electronic Media for the School*

Market: 1996-97 Review, Trends, and Forecasts.

- Fourteen percent of U.S. households are now online. Forty-eight percent of these wired homes use an Internet service provider (ISP) to connect to the Internet, while 35% rely on online services for their online connection.—*From the Odyssey Homefront Survey.*
- The year 1996 was unkind to online services. America Online was the only online service to increase its hold on the home market: 18% of homes with a PC currently subscribe to AOL compared to 14% in January. CompuServe dropped from 6% in January to a current 5% of PC households. Prodigy also

- lost a percentage point, dropping from 5% of PC households in January to a current rate of 4%. The Microsoft Network held steady with 1% of PC homes.—*From the Odyssey Homefront Survey.*
- Eighty-nine percent of consumer households agree that computer skills are necessary for a student to succeed.—*From the Northlich Stolley LaWarrel Techtel Consumer Technology Attitude Survey.*
- Bad news for advertisers: Only 47% of women find advertising for computer-related products appealing.—*From the Conde Nast Publications/IntelliQuest Women & Technology Survey.* ■

Top It Off Toupees
Vince Puccinelli, Head Honcho

Things To Do Today:

- e-mail Al before/after photos
- schedule consultation w/Ron P.
- fax "Class Reunion Special" ad
- e-mail Chuck re: fitting
- fax billing reminder to Big Wigs
- check out Rogaine® website
- send catalog to Scott Costanza
- place order w/Synthetic City



(style shown, "The Matador")

**Call now
to try
it free**
(Or buy it for just \$49.)

How you use our free software is your own business.

Keeping on top of your small business requires that you wear many hats. And the easiest way to do this is to slide a 30-day risk-free trial of the new Magic Cap® for Windows® 95 software into your personal computer.

This communications tool is incredibly simple to use. Just spend a few minutes with the on-line tutorial and in no time you'll be ready to hop to it. Send e-mail using America Online® or an Internet service provider, fax documents and surf the Web like a pro. Click your mouse to send letters and attach documents, sound clips, photos and more.



Get a full working version risk-free
for 30 days. Call toll-free,

1 (888) 239-4824

and ask for offer 15322.

Magic Cap for Windows is the all-in-one tool for people like you who think running your own business shouldn't require pulling your hair out.



General Magic

* Don't panic: this is not the area code for Jupiter. Due to a massive depletion of (800) numbers, (888) is now an official toll-free prefix. Your call and your 30-day software trial are absolutely free. Limited time offer © 1996-1998 General Magic, Inc. All rights reserved. General Magic, the General Magic logo and Magic Cap are registered trademarks of General Magic, Inc. Rogaine is a registered trademark of Upjohn, Inc. Windows is a registered trademark in the United States and other countries of Microsoft Corporation. America Online is a registered trademark of America Online, Inc. All other trademarks are property of their respective owners.

NOVICE NOTES

Stocking Stuffers For The PC



Glow-in-the-dark neckties, piggy banks that say "thank-you" when you deposit a coin, and gift subscriptions to *Turkey Hunters Weekly*. It's easy to find gifts for the person who has everything. But what do you give the PC that has everything? Here are a few suggestions.

■ KONEXX Portable Computer Telephone Interface Products.

Getting an Internet or fax connection for your portable computer is not always easy when you are away from home. Although some hotels and airports offer facilities to accommodate travelers who need online access, there are just as many that don't. Now, with KONEXX's pair of portable connection devices, finding a connection is as easy as finding a telephone.

The Mobile Connector lets you connect a standard modem to a digital phone line. "Aren't computer signals already in digital form?" you may ask. Well, yes. But in order for these signals to be transmitted over the typical analog phone line, they first must pass through a modem. The modem translates the outgoing digital signals into analog signals, and it translates the incoming analog signals into digital signals. When you use a modem to connect to a digital phone line, you need a device that reverses the modem's effect. The Mobile Connector does just that, translating the

analog signal back into a digital signal so that it can be transmitted over the digital telephone line.

The KONEXX Koupler lets you connect a modem to almost any phone in the world. This portable acoustic coupler straps to the headset of a phone. The "sound bytes" of the analog data transmission travel over the Internet in the same way that voice data travels over the phone lines. The KONEXX Koupler works especially well with pay phones. As long as you keep plugging in the quarters, you will remain connected to the Internet.

Both products come with a two-year warranty and include batteries.

Price: \$149
KONEXX (Unlimited Systems Corporation Inc.)
(800) 275-6354
(619) 622-1400
<http://www.konexx.com>

■ MIDI Land FD-02 Multimedia Microphone. The MIDI Land FD-02 multimedia



microphone is as much a conversation piece as it is a desktop recording mechanism. In its elongated form, it resembles a 16-inch wand. But in the hands of a creative computer user, the microphone can be bent and twisted into any useful or thought-provoking design. Use it as a microphone or for stress relief. Whether it's spiral, z-shaped, or tied in knots, this microphone will stay on your desk for a long time.

Price: \$29.95
MIDI Land Inc.
(909) 592-1168

■ KidSoft CD-ROM Software.

The kids won't find much software under the tree if Kris Kringle has to spend \$50 or \$60 on each application. But with KidSoft's line of \$12.99 CD-ROMs, he can afford to throw a few programs in every stocking.

KidSoft has joined forces with Sierra Online, Time Warner, Compton's, and other producers of children's software to offer these low-cost titles. The programs range from educational software, such as *Oceans Below*, *Early Math*, and *Travel Rama USA*, to entertainment titles, such as *3D Table Sports*, *FX Fighter*, and *Unnecessary Roughness '95*.

Look for KidSoft titles in more than 2,500 stores nationwide, including Toys R Us, Circuit City, and Egghead.

Price: \$12.99
KidSoft
(800) 354-6150

(408) 255-3434
<http://www.kidsoft.com>

■ Case Logic Diskette & CD Storage Cases. CD-ROMs may be called "compact" and diskettes may be considered



"portable," but ask anyone who has tried to store large quantities of either one, and they'll tell you there's nothing compact or portable about them. Jewel cases take up a lot of room after you acquire a number of them, and storing diskettes in a shoebox just doesn't seem efficient.

Fortunately, Case Logic is in the business of organizing items of this size. Case Logic offers an entire family of compact portable storage units for your computer software. Not only will they protect and organize your valuable diskettes and CD-ROMs, but these attractive plastic, nylon, and Koskin—a form of faux leather—cases will look good on any desktop.

Case Logic also offers cases for laptop computers, audio CDs, and tapes.

Price: \$9.95 to \$49.95
Case Logic
(800) 447-4848
(303) 530-3800
<http://www.caselogic.com>

**GUARANTEED
CALCULATION
ACCURACY—
SEE DETAILS
BELOW**

FREE TAX SOFTWARE

Now there's an easy and accurate way to complete your federal income taxes. Announcing **Tax Mate**—tax preparation software that provides all you need to file your 1996 federal income taxes.

It determines your needs!

Like a professional tax preparer, Tax Mate interviews you. Your responses determine which forms and schedules need to be completed. Tax Mate offers the most commonly used forms and schedules (Forms 1040, 1040A and 2441, and Schedules A, B, D, R and EIC), and all can be printed in an IRS-approved manner on your own paper.

It organizes and calculates!

Tax Mate automatically performs all necessary tax calculations; enters the information on all related forms and then audits your return like a sharp-eyed accountant.

You just print, sign and mail!

Once the calculations are done, simply print your complete IRS-approved forms on your dot matrix or laser printer.

All calculations are guaranteed!

Rest easy with Tax Mate—all the calculations are guaranteed accurate! Should you be assessed an IRS penalty due to a calculation error resulting from a fault in Tax Mate, we—not you—will pay the IRS penalty!

Brought to you by experts.

Brought to you by Parsons Technology—the company with more than 9 years proven personal tax software experience and millions of completed returns—this exciting, FREE offer is our way of introducing you to the newest development in personal tax return preparation and to our family of more than 80 high-performance products!

Order today! Call toll-free

1-800-4-TAX-MATE
(1-800-482-9628)

24 hours a day, 7 days a week, or order online: Internet (<http://www.parsonstech.com>)
CompuServe® (GO PA) • America Online® (keyword PARSONS)

Tax Mate for Windows requires an IBM® or compatible PC running Microsoft® Windows 3.1 or higher, 2MB RAM and a hard drive with 4MB free disk space. System 7.0 or higher, 4MB RAM and 5MB hard drive space. Works with most currencies and printers. Copyright © 1996 Parsons Technology, Inc. All rights reserved. Tax Mate is a trademark of Parsons Technology, Inc. All trademarks or service marks designated as such are marks or registered marks of their respective owners.

* Shipping and handling charge is non-refundable.

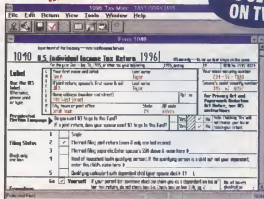


"I just finished my federal tax return using Tax Mate. Your software made doing my taxes almost enjoyable. This is one product that is as good as its advertising makes it sound."

Doug DeVries
Bountiful, UT

**A SMALL DEDUCTION
WITH BIG RESULTS!**

**AS SEEN
ON TV!**



Tax Mate makes doing your tax return a snap!

Best of all, it's FREE!

To take advantage of this amazing offer, pick up the phone or send/fax the attached coupon. Tax Mate is FREE—all you do is pick up the \$8.95 shipping and handling charge! Doing your taxes has never been easier!

Please send me Tax Mate for \$89 FREE!

*Add \$8.95 for shipping and handling†. (No purchase orders, please.)

Includes User's Information & Expert Technical Support. Ships December 1996!

Name _____
Address _____
City _____
State _____ Zip _____
Day Phone (____) _____ Evening (____) _____

Version: ☐ Windows ☐ CD-ROM We will ship HD 3.5" Windows disks if boxes are unopened.

Disk Size: ☐ 3.5" ☐ 5.25" ☐ 5.25" ☐ 5.25" Windows disks if boxes are unopened.

Method of Payment: ☐ MasterCard ☐ Discover/Novus ☐ American Express

☐ Visa ☐ Check or Money Order

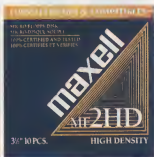
Card # _____ Exp. _____

☐ Just send me your FREE software catalog!

**PARSONS
TECHNOLOGY**

Your priority code is 751306F

Parsons Technology • Product Development Center
One Parsons Drive • PO Box 100 • Hanover, IA 52233-0100



HIGH PERFORMANCE RUNS IN THE FAMILY.

For over 25 years, the Maxell name has stood for high performance and solid reliability. Our dedication to superior quality has enabled us to create a full line of data storage products that meet a wide range of user requirements. Adding to our already extensive line of floppy disks, computer tape products and optical disks, we're proud to introduce the newest members of our family: CD-R Optical Disks, Second Generation 1.3 GB Optical Disks, the 4 GB HS-4/120 4MM Tape, and a complete line of computer accessories. Innovative thinking from Maxell. We keep it in the family.





Using The PATH Command

One of the best things about DOS is that you always control the action. A DOS prompt will sit there forever, waiting for you to give an instruction. The better the instruction, the more effective your DOS experience will be.

One way to make your DOS experience a better one is to understand the PATH command, available in DOS 2.0 and newer.

In DOS, each of your drives is divided up into different storage areas called **directories**. Each drive has a **root directory**, which is the main directory on a particular drive. The directories within that root directory are called **subdirectories**. A subdirectory is basically a specific storage area, similar to a drawer in a computer file cabinet, on your drive. You can copy files into a particular storage area, keep the files there, and organize your work.

The subdirectories branch away from the root directory. For example, WP51 (the *WordPerfect* directory) and WINDOWS are subdirectories in the C: root directory.

One problem that most DOS users face is remembering the names of those directories and programs. You may know that typing **wp** starts *WordPerfect*, for example, but what directory must you be in to type **wp**? Some programs save you that problem by automatically adding their path to your system's PATH line during installation. That means you can type **wp** at the root directory prompt (C:), and the program will start. However, some programs don't add their path, and this is where the PATH command comes in handy.

The PATH line, located in your *Autoexec.bat* file, displays a hierarchy of drives, directories, and/or executable files. When you type the command to launch a program in DOS, the system will search *Autoexec.bat* and read the PATH line for the appropriate program or

executable file. (The *Autoexec.bat* file contains instructions to the computer system that are carried out every time the system is turned on.)

The end result is an easy, fast approach to accessing a variety of programs directly from the DOS prompt.

The first thing to do before changing your PATH line is to make a backup copy of your *Autoexec.bat* file on a diskette. This file is crucial to the operation of your computer, and you should *never* make any changes to it before making a backup copy.

■ **Adding Files.** To add files to the PATH line, you must edit the *Autoexec.bat* file. At the C> prompt, type

edit autoexec.bat

and press ENTER. This command launches the DOS Editor, where you can view the contents of your *Autoexec.bat* file. In this file, you will see the line that begins with "path."

Let's assume that your PATH line contains only the programs DOS and Windows. The line will read

```
PATH C:\DOS;C:\WINDOWS
```

As your PATH line currently exists, you can run Windows by typing **win** at the C> prompt. The PATH line lets the computer search the WINDOWS directory and start Windows.

Let's say another one of your favorite applications happens to be *WordPerfect*, which resides in the WP51 directory. With the current PATH line, you would have to type **cd\wp51** to change to the WP51 directory. Only after doing this could you type **wp** at the DOS prompt to launch *WordPerfect*.

By adding *WordPerfect* to the PATH line, you can avoid changing to the WP51 directory each time you need to access the program. To add *WordPerfect* to the PATH line, move to the end of the PATH line in *Autoexec.bat* and type **%;wp51**.

You'll need to save your changes before exiting *Autoexec.bat*. The changes will take effect

after you restart your system. Your line should then read

```
PATH C:\DOS;C:\WINDOWS;C:\WP51
```

You can now successfully access either Windows or *WordPerfect* from the C> prompt. The PATH line is instructing the system to make a path to your Windows and *WordPerfect* applications.

You also can make a path, for example, to access certain games within the GAMES directory on your system. For example, if you have a chess game within your GAMES directory, you can access the game from the C> prompt by adding the GAMES directory, and the executable file for chess, to the end of your PATH line. This would cause your line to read

```
C:\DOS;C:\WINDOWS;C:\WP51;C:\GAMES
```

Then, you could just type **chess** at the DOS prompt to open the program. As you can see from the above example, the PATH line includes the drive name/root directory (C:), the WINDOWS directory, the WP51 directory, and the GAMES directory.

■ **Things To Remember.** Try to place your most commonly used files closer to the front of the PATH line, since the system searches the line from left to right.

While it is true that the PATH line is only capable of taking up to 127 characters, the amount of files you want included on the feature may exceed that character count. However, any programs after the 127-character limit won't be recognized, so you would need to start another PATH line.

With DOS 6.0 and newer, you can create a PATH line longer than 127 characters. By moving your PATH line from the *Autoexec.bat* file to the *Config.sys* file, you can create lines longer than the 127-character limit. Use the DOS Editor to cut the line from the *Autoexec.bat* file and paste it into *Config.sys*. After you reboot the system, the PATH line should now be actively read from *Config.sys*.

Because installation of a new program has a tendency to install itself onto a PATH line, it's always a good idea to keep the *Autoexec.bat* file and the PATH line maintained. A handy rule of thumb would be to keep the PATH line contained to one line, or 80 characters in length. ■

by Mike Friend

Installing Device Drivers In Windows

When Windows 3.x wants to give or take orders from your computer's hardware (such as a mouse, sound card, or printer), it needs a special piece of software called a device driver. Each piece of hardware equipment attached to your PC needs its own driver. If the software driver isn't installed, your PC won't be able to interact with the hardware.

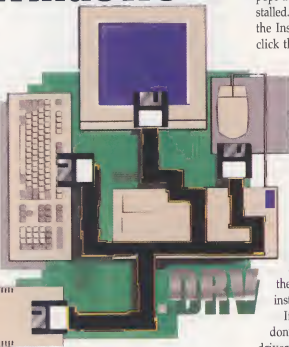
The Windows operating environment comes with a built-in drivers, while new devices such as a keyboard, monitor, or CD-ROM drive generally come with a diskette containing special drivers. Drivers, however, are updated frequently so looking on a manufacturer's World Wide Web site is a great way to find new versions.

In Windows, there are several ways to install a device driver for a new monitor (which Windows calls a display), keyboard, mouse, or network. (NOTE: Before changing any settings, make a note of their current configurations so if the new setting doesn't work, you can fall back to a previously functioning setting.) Let's walk through one of the processes:

1. In Program Manager, double-click Main.
2. When it opens, double-click Windows Setup.
3. When the Windows Setup dialog box appears, select Options, then Change System Settings.

4. When the Change System Settings dialog box appears, you'll see Display, Keyboard, Mouse, and Network listed on the left.

5. Clicking the corresponding down arrow on the right of each category presents a menu of choices. For example, under Keyboard, you'll find choices such as All AT Type Keyboards and AT&T '301' Keyboard. When you see the brand of keyboard you're installing, click it. If it's not there, click the down arrow and select Other Keyboard (Requires Disk From OEM). You'll need the diskette (with the new driver on it) that came in the same box as your new keyboard (or mouse, etc.).



6. After clicking the driver, you'll be presented with two choices: Don't Restart Now or Restart Now. (NOTE: New driver installation doesn't kick in until you restart or reboot your PC. Choosing Restart Now automatically takes care of that step for you.)

After making changes, if Windows doesn't start or if it does start but you can't read anything, don't worry. Exit to DOS (by pressing ALT-F4 until the Exit Windows box pops up and then pressing ENTER). At the DOS prompt, change to the WINDOWS directory (by typing `cd \windows`), then type `setup` and press ENTER. Monitor, keyboard, and mouse configurations can be changed using a combination of the Up and Down arrow keys and pressing ENTER.

■ **Multimedia Drivers.** Installing a driver for a multimedia device such as a sound card or CD-ROM drive is basically the same, with a few minor changes:

1. In Program Manager, double-click Main.
2. When it opens, double-click the Control Panel icon.
3. When the Control Panel dialog box opens, double-click the Drivers icon.

4. The list of installed drivers are required by Windows and should never be removed. On the right are buttons to Close, Add, Remove, Setup, or summon Help.

5. To Add a driver, click the Add button. Up pops a list of additional drivers that can be installed. (To remove an old device driver from the Installed Drivers box, highlight it, then click the Remove button. Caution: Removing drivers can affect Windows performance. If you're not sure what the driver does, leave it alone.)

6. Highlight the preferred driver with a click, then click OK.

7. If Windows finds the driver already on the hard drive, a message will appear saying that the driver exists and will ask you whether you want to install the existing driver or a brand-new one. If you want the existing driver, click Current. But if you have a new driver on a diskette—either from an updated version of Windows or from the manufacturer of the hardware you're installing—select New.

If you don't see the driver you need, don't panic. It just means that a particular driver has not yet been introduced to Windows 3.x. If you have the new drivers on a diskette, click Unlisted Or Updated Drivers.

8. When the Install Driver box appears, put the diskette in the diskette drive (which is usually the A: drive).

9. Click Browse to look for the new driver. (It will have a .DRV extension.) When you see the driver in the Browse window, click OK.

10. When the System Setting Change dialog box appears, you'll be presented with two choices: Don't Restart Now or Restart Now. Select Restart Now to reboot your PC and load the new driver(s).

■ **Printer Drivers.** To install a Printer Driver, follow steps 1 and 2 listed above, then double-click the Printers icon. A Printers dialog box lists the printers already installed. Select Add to display a list of Windows-supported printers. Select the printer, click the Install button, and follow steps 7 to 10 listed above.

As you can see, adding drivers isn't any more difficult than adding the hardware peripheral. And once you get the software instructions installed, you'll be ready to take advantage of that new purchase. ■

by Michael Cahlin

PLEASE:

BEFORE YOU TAKE ANOTHER PILL, READ THIS.



Get critical information on side effects, interactions and more with Encyclopedia of Drugs—FREE!

Do you know if it's OK to take that cold tablet with your other medication? If you miss a dose of Prinivil, should you double your next?

If you're uncertain, relax—*Encyclopedia of Drugs* can help you!

Best of all, it's FREE!

That's right. This easy-to-use software puts up-to-date information on more than 9,000 prescription and non-prescription drugs at your fingertips—FREE!

Pharmacies and hospitals across the country rely on the same source for their information—First DataBank!

Encyclopedia of Drugs gives you a general description of each drug, plus vital details like side effects, drug interactions, precautions, storage, notes and more!

Why is Encyclopedia of Drugs free?

It's simple. We want you to take your medications safely. And we want to count you among our more than 3.2 million loyal, satisfied customers. They enjoy many of our more than 70 affordable software titles—we're certain you will, too!

Hurry! Order your FREE copy today!

Encyclopedia of Drugs has a retail value of \$39. But for a limited time, you can have it FREE. All you pay is \$8.95 for shipping charges.

So take the risk and uncertainty out of your medications—with FREE *Encyclopedia of Drugs*!

Call now to order:

1-800-243-6169

24 hours a day, 7 days a week! Or fax your order to 1-319-395-7449.

You can also shop online:

<http://www.parsonstech.com>, America Online® (keyword PARSONS), or CompuServe® (GO PA). Or clip and send the coupon. For fastest service when ordering by phone, please have this ad and your credit card handy.

System Requirements: The Encyclopedia of Drugs for Windows requires an IBM® or compatible PC, 2MB RAM, Microsoft® Windows 3.1 or later running in standard or enhanced mode, and approximately 5MB hard drive space. Encyclopedia of Drugs for DOS requires 640K RAM and 4.5MB hard drive space. Encyclopedia of Drugs for Macintosh requires 4MB RAM (2MB free), system 7.0 or later and 5MB hard drive space. Copyright © 1996 Parsons Technology, Inc. All rights reserved. Encyclopedia of Drugs is a trademark of Parsons Technology, Inc. All trademarks or service marks designated as such are marks or registered marks of their respective owners. Shipping charges are non-refundable.

**\$39
FREE
SOFTWARE!**

Learn how to make
your medications the
most effective.



Understand the side
effects any medication
may cause.



Know which drugs
you can take together—
and which you should
never mix.



If you miss a dose,
should you skip it or
double the next dose?
Find out instantly.



☒ **Yes! Rush me
Encyclopedia of
Drugs for \$39 FREE!***



Includes user information and expert technical support.
*For shipping charges, please add \$8.95, C\$11.95 for Canadian
orders or \$20.95 for orders outside North America.
No purchase orders please.

Name _____

Address _____

City _____

State _____

Zip _____

Day Phone () _____

Evening phone () _____

Disk Size: ☐ 3.5" ☐ CD-ROM (Windows only)

Format: ☐ DOS ☐ Windows ☐ Macintosh

Disk Density: ☐ High ☐ Low (DOS only)

We will ship HD 3.5" Windows disks if boxes are unmarked.

Payment: ☐ Check or Money Order enclosed

☐ Visa ☐ American Express

☐ Discover ☐ MasterCard

Card # _____

Exp. Date _____

☐ No, I don't want to order now, but please send me your
FREE catalog!

Or Call 1-800-243-6169



Product Development Center, One Parsons Drive,
PO Box 100 Hanworth, IA 52233-0100

Your priority code is 391306A

**Available
for Windows
DOS or Mac**

Basic Training

Regardless of the operating system you choose, there are a few elementary functions you should understand. This monthly section is your one-stop guide to learning these crucial first steps in DOS, OS/2 Warp, Windows 3.1, and Windows 95. Use it to learn your operating system and see whether others offer a smarter way to work.

Games



Though we usually cover more serious aspects of computing in "Basic Training," we thought for the holidays it would be fun to get acquainted with the playful side of operating systems.

■ MS-DOS 6.22

MS-DOS includes no games.

■ OS/2 Warp Connect

To find the games in OS/2, double left-click OS/2 System and then Games. There are three games in the Games folder: Solitaire-Klondike, OS/2 Chess, and Mahjongg Solitaire. Double left-click the one you want to play.

Solitaire-Klondike is the computer version of the classic one-player card game. There are seven stacks of cards with the top card face up. The leftmost pile has only the top card, the next has one face down under the top card, the next has two, and so on. The remaining cards are in a stack. Left-click this stack to flip groups of cards. You decide how many to flip each time and how many passes you can make through the deck by choosing Variations from the Options menu. You only can use the top card of those flipped. The goal is to move all the cards into four stacks, building each suit from Ace to King. You can move cards by dragging them to a card one value higher in the opposite color. For example, a black nine can be moved onto a red 10. You can move a whole string of cards together, if they alternate in this fashion. For example, that black nine could have a red eight on it, and you could move both by dragging the nine. When you uncover a card that's face down, flip that card face up and continue play. If you empty a column, you can place a King there to start a new column in alternating colors.

OS/2 Chess lets you play chess against someone else on your computer, someone on another workstation on your network, or the computer.

Mahjongg Solitaire is a Chinese tile game in which you remove matching pairs of tiles from a stack, attempting to remove all of the tiles. The catch is that if a tile is partly covered by another tile or doesn't have at least one long side exposed, you can't pick it up, requiring some planning and strategy on the player's part.

■ Windows 3.1

Windows 3.1 includes two games, Solitaire and Minesweeper, in the Games program group. Double-click one to play it.

Solitaire is the same as OS/2 Warp's Solitaire-Klondike, with a few differences in appearance. Again, you can control how many cards are flipped at once and how many passes you make through the deck. In Windows, these choices are made in the Game menu, under Options. Other than that, the game plays as described under OS/2.

Minesweeper is a strategy game in which you click squares in a grid, hoping to find numbers instead of mines. The number in a square indicates how many adjoining squares contain mines. Logic is a better tool than luck for this game. When you think a square has a mine under it, right-click it to place a flag there. You can right-click again to place a question mark instead of a flag or to remove all marks from the square. If you find a mine, you're dead, and the game is over. If you successfully uncover all the squares without mines, you win.

■ Windows 95

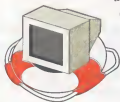
Win95 includes Solitaire, Hearts, Minesweeper, and FreeCell. To find these games, choose Programs from the Start menu, then Accessories, then Games. Left-click the game you want to play.

You may not have installed the games during Setup. If not, go to the Control Panel by double left-clicking My Computer and then Control Panel (or by choosing Settings and Control Panel from the Start menu). Then double left-click Add/Remove Programs and choose the Windows Setup tab. Double left-click Accessories, left-click the Games check box, and left-click OK.

Solitaire and Minesweeper are the same as in Windows 3.1. Like Solitaire, the goal in FreeCell is to build four stacks, building the suits from Ace to King. However, instead of having stacks of cards and a deck to deal from, FreeCell is played with all the cards face up in columns. There are also four cells in the upper-right corner to which you can move cards to access the cards beneath them. When a column is emptied, you can place any card there, not just a King. To move a card, left-click it and then the location to which you want it moved, instead of dragging it. Like in Solitaire, to move a string, it must be in the appropriate red-black-red-black numerically descending order. However, you can't move unlimited numbers of cards at one time. You only can move as many cards as there are empty cells in the top-left corner of the screen, plus one. If all the cells are full, you only can move one card at a time. If all four are empty, you can move strings of five.

Hearts is a card game in which you compete against three computer-generated players. The player with the two of clubs plays it to begin the game and play continues clockwise until each player has played one card. If you have one, you must play a card in the same suit as the first card played in that round. As in Bridge, you "take tricks" (take the four cards from a round of play) by being the player who lays down the highest value card. Unlike Bridge, however, you want to force others to take the high cards. The goal is to have as few points as possible at the end of the round. You get one point each for every heart you've taken, regardless of the value of the card, and 13 points for the Queen of spades. Play continues until one player reaches 100 points.

Help



On a more serious note, here's a look at how the online Help features can assist you in understanding the more confusing aspects of your operating system.

■ MS-DOS 6.22

For a list of topics available in MS-DOS Help, type **help** and press ENTER. Use the arrow keys to reach the topic you want to know more about and press ENTER for details.

For help on a specific command, type **help** followed by the name of the command. For example, if you want help with the DEFRAG command, type **help defrag** and press ENTER.

■ OS/2 Warp Connect

For help in OS/2 Warp, double left-click Information. You then can double left-click Master Help Index, OS/2 Warp Glossary, or OS/2 Warp Command Reference. The Master Help Index is an alphabetical listing of topics; you either can double left-click a topic or left-click Search Topics to search all of the topics for a keyword. The Glossary is an alphabetical listing of terms; double left-click a term to see its definition. The Command Reference is a list of the commands in OS/2 Warp; you can choose to see them listed either by task category or by name.

■ Windows 3.1

For help in Windows, open the Help menu in the window where you need assistance. For example, the Help menu in Program Manager offers information about Windows in general, while Help in a specific application such as Paintbrush offers tips on that application. Help menu options include Contents (a list of major topics covered in Help) and Search For Help On, which lets you search an index for a keyword or phrase to get help.

■ Windows 95

To get help in Win95, left-click Help in the Start menu. In the Help Topics: Windows Help window that opens, there will be three tabs: Contents, Index, and Find. The Contents tab lets you double left-click a topic to get information about all some topics

have subheadings; keep left-clicking subjects until you find the one you want. The Index tab lets you type a word, or the beginning of a word, to find it in the list of topics in the Help Index. Then, left-click the topic and left-click Display to see a list of topics relating to the subject you choose. Double left-click one of these topics to get information on it. (You may need to work your way through several layers of lists of topics.)

The Find tab lets you search for words in the Help topics, instead of the topic list alone. The first time you choose this option, the Find Setup Wizard will run, creating a database of all the words in the Help files for you to search when you use the Find feature. Choose the options you want, such as database size, and left-click Next. Then, left-click Finish for the database to be created. Once you've done this, each time you choose the Find tab, you can enter a word you want to find and left-click Display for Help to show you topics that contain that word. The Find tab also lets you select words or topics from lists to narrow the search process. Choose the one you want and left-click Display.

DELETING FILES AND DIRECTORIES



If you never delete old files from your system, you will eventually run out of room for others. Therefore, once you're sure you no longer need a certain file, you can delete it from your computer, making room for new information.

■ MS-DOS 6.22

To delete a specific file in DOS, type **del** followed by the name of the file and press ENTER. For example, to delete a file named Myfile.txt, type

```
del myfile.txt
```

and press ENTER.

The DELTREE command offers the easiest way to delete a directory in DOS. This command, available in MS-DOS versions 6.0 and newer, deletes a whole branch of a directory tree at a time, including hidden, system, and read-only files. To delete a directory named C:\MYDIR, type

```
deltree c:\mydir
```

at the DOS prompt and press ENTER. You'll get a message asking, "Delete directory "mydir" and all its subdirectories? [y/n]" Press Y to delete the directory and its contents.

If the directory is empty, you also can use the RD (Remove Directory) command, which is the same as the RMDIR command. To remove a directory named C:\MYDIR, first make sure it's empty, then type

```
rd c:\mydir
or
rmdir c:\mydir
```

at the DOS prompt and press ENTER.

■ OS/2 Warp Connect

The Shredder is OS/2's quick way to delete files, objects (icons), or folders. To delete an object, point to it, press and hold the right mouse button, drag the object to the Shredder on the LaunchPad, and release the mouse button. A Delete Object(s) dialog box opens; left-click Delete to delete the file or object named in the box. You then may get an additional confirmation message; if one does appear, confirm that you want to delete the object.

You can set the confirmation message options by opening OS/2 System, then System Setup, and finally System. Choose the Confirmations tab and place a check in the boxes next to the options you want enabled. To add or remove a check, left-click the box. The options include Confirm On Folder Delete and Confirm On Delete. While disabling these confirmation messages may save you a few seconds when deleting files or folders, it will also make it easier for you to accidentally delete something you want to keep.

■ Windows 3.1

To delete a file or directory in Windows 3.1, open File Manager from the Main program group in Program Manager. Select the file or directory you want to delete by clicking it and then choose Delete from the File menu. In the Delete dialog box that appears, check that the file listed is the one you want to get rid of and click OK to delete the file.

■ Windows 95

To delete a file or directory in Win95, find it in My Computer, left-click it to select it, and choose Delete from the File menu.

PASSWORDS



Passwords offer a simple way to keep the information on your computer hidden from prying eyes. In addition to the screen saver password options we'll discuss next, some operating systems offer the following password options to protect your information.

■ MS-DOS 6.22

DOS lets you place password protection on backup copies of files. If you're backing up confidential data, you want to use a password so no one can gain access to the data on the backup diskettes. You'll need the password to access the data in the files, but you can delete or overwrite the files without it, so this protects the files only from unauthorized viewing, not from sabotage.

Start **MSBACKUP** by typing **msbackup** at the DOS prompt and pressing ENTER. Choose Backup, then Options. In the list of options, place a check in the box for Password Protect Backup Sets. Press ENTER and, when you return to the main screen for Backup, select the file(s) you want to back up. Choose Start Backup; this will open the Enter Password dialog box. Choose a password of up to seven characters and type it twice: once to choose it and again to confirm it. Choose OK when you're done. The password is case-sensitive; Word is not the same as WORD or word.

■ OS/2 Warp Connect

OS/2's Lockup feature lets you lock the keyboard and display. To enable this feature, you first need to establish a password. To do this, left-click Lockup on the LaunchPad. Type a password in the Password field and press ENTER. Type the same password in the Password (For Verification) field and left-click OK. Now, when you want to lock up your computer, left-click the Lockup button. The OS/2 logo screen (the screen saver) appears, with a Help button in the bottom right corner. To return to the desktop, type your password and press ENTER. To change your password, use the Settings menu choice in the desktop pop-up menu.

Once this feature is enabled, if the screen saver starts after a period of inactivity, it will automatically require that the password be entered in order to return to the desktop.

■ Windows 3.1

Password protection in Windows 3.1 is available through the screen saver option described in the next section. If you have *Microsoft Office*, you can add a button for the screen saver to the Office toolbar. If you want to activate the screen saver and password protection without waiting for the period of inactivity, just click the Screen Saver button.

■ Windows 95

Win95 also offers screen saver password protection as described in the next section. Again, the Office toolbar lets you immediately activate the screen saver and password protection.

Win95 also offers several other password options that are controlled through the Passwords icon in Control Panel, which you can access through My Computer or the Settings option on the Start menu. Double left-click Passwords to open the Passwords Properties window. (Depending upon the choices you made during the Win95 installation process, you may not have these features. If you don't, choose Find from the Start menu, then choose Files Or Folders. Search for *.pwl, rename the file with the .OLD extension, and restart your PC. When you restart, you should get a window telling you to choose a user name and password. You then should have all the options.)

In the Passwords Properties window, the Change Passwords tab lets you choose Change Windows Password or Change Other Passwords. (Other Passwords might include network access passwords.) If you choose Change Other Passwords, highlight the one you want to change from the list and left-click Change. From there, the process is the same as if you had chosen Change Windows Password: You will be asked to enter your old password (if there is one) and enter your new password twice. Note that you may not be allowed to change some passwords, depending upon the setup of your network.

The User Profiles tab lets you choose whether to have all users of the computer share one set of preferences (such as screen saver and programs included in the Start menu) or to have each user's preferences saved. If you choose the second option, your preferences will be saved. Then, when you use your Windows password to log in, Win95 will configure the system with your preferences.

The Holiday Season Is Quickly Approaching



For all the gifts you give, don't you deserve a gift of your own?

Purchase a gift subscription for a friend, family member, or co-worker and receive **TWO ADDITIONAL ISSUES** on your existing subscription.

What gift could be better than a subscription to PC Novice magazine? It keeps on giving month after month for an entire year, and it's a very useful, educational tool.

It's as easy as

1-2-3

1) Make a list of all your friends, family members, and co-workers that you need to purchase a holiday gift for.

2) Decide which of these individuals could really use PC Novice magazine. You can ask yourself the following questions:

- ☐ Do they own a computer?
- ☐ Do they use a computer at home or at the office?
- ☐ Are they interested in learning more about computers?

Well, who isn't?!

3) Complete the form to the right and send it in with your payment to qualify for your two additional issues.

Note: If you would like to send a gift subscription to more than one individual, include additional names and addresses on a separate sheet of paper.

☐ Please send the next 12 monthly issues of PC Novice for only \$29 to this recipient, and send me two additional PC Novice issues on my existing subscription.

- Offer valid only if payment accompanies order.
- NOT valid on past gift subscriptions
- Two additional issues valid only on EXISTING, PAID, CURRENT subscribers.
- **NOTE:** This subscription will begin with the January 1997 issue and a letter announcing your gift will be sent along with your personal message the first week of December 1996.

OR please mail form to:
PC Novice Gift Program
120 West Harvest Drive
Lincoln, NE 68521

Outside U.S. \$49—Airlift (except Canada/Mexico\$37) Payable in U.S. funds

Fax your order to:
402-479-2193

Please send the renewal notice to:

- ☐ Me ☐ Recipient
- ☐ Payment Enclosed ☐ Bill Me (I won't receive the two free issues)
- ☐ Charge to my:
- ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover

Account Number: _____

Expiration Date: _____

Signature: _____

Fold on dotted line

Gift To:

Name: _____

Company: _____
(If using business address)

Phone: _____
☐ Home ☐ Business

Address: _____

City: _____

State: _____ ZIP: _____

Fold on dotted line

Gift From:

(Please put your subscription information below)

Name: _____

Company: _____
(If using business address)

Phone: _____
☐ Home ☐ Business

Address: _____

City: _____

State: _____ ZIP: _____

7565

Personal Message:



Does this sound familiar?

"I'm going to get my holiday shopping done early this year!
I'm not waiting till the last minute!"

And, it always starts with the same questions:

What do I get each person on my list?

What do they need?

What do they like to do?

Do they have a hobby?

What size do they wear?

What's their favorite color?



Tape here

PC NOVICE

Tape here

Tape here

No more wondering, no more tracking receipts, no more crowded shopping malls or wrapping paper! We have a gift for everyone (all levels of computer users)! It's **PC Novice** magazine!

This year you can give a gift subscription and receive 2 additional issues on your existing subscription!

Check it out! Fill out the form on the other side of this page and mail it in today!



Fold on dotted line

Fold on dotted line



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 10 LINCOLN, NE

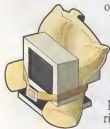
POSTAGE WILL BE PAID BY ADDRESSEE:

PC NOVICE

P.O. BOX 85380
LINCOLN, NE 68501-9647



SCREEN SAVERS



Screen savers were originally designed to prevent a screen's image from permanently burning onto a monitor when left on one screen too long. After a period of inactivity, the screen saver begins to display images. While monitors don't really need screen savers anymore, they can be a nice way to personalize your computer. They also can be a form of security; you can add a password to your screen saver to stop unauthorized people from gaining access to your work.

■ MS-DOS 6.22

MS-DOS doesn't have a built-in screen saver. You can create one, however, by making a batch file that scrolls text down your screen. For example, if you want the text to say, "Hello," create a batch file named `ss.bat` containing the lines

```
@echo off
echo Hello
call ss
```

and run the file when you want to activate the screen saver. To create the file, type `edit` and press ENTER to start the MS-DOS Editor. Press ESC to clear the dialog box and ALT to activate the menu bar. Choose New from the File menu and type the lines as they appear above. Press ALT again to reactivate the menu bar; choose Save As from the File menu and type `ss.bat` in the File Name field. Press ENTER to save the file under that name, go back to the File menu, and choose Exit.

To run the file, just type `ss.bat` at the DOS prompt and press ENTER. To stop the screen saver, press CTRL-BREAK. DOS will display a message asking, "Terminate batch job (Y/N)?" Press Y to stop the screen saver.

■ OS/2 Warp Connect

OS/2's screen saver is its logo screen—the same one you see when you start your computer. The screen saver starts if you've been inactive, meaning you haven't moved the mouse or pressed a key, for three minutes.

■ Windows 3.1

Windows offers several screen savers. You can choose one as basic as a blank screen or as complex as the Marquee option, in which you enter text, and the screen saver scrolls it across a colored background. To activate a screen saver, choose Control Panel from the Main program group and double-click the Desktop icon.

Click the drop-down list and highlight the screen saver you want. Three of the options (all but the blank screen) can be customized by clicking Setup. The Setup window will vary depending upon the screen saver you choose. The Marquee setup, for example, lets you set the speed at which the text moves across your screen; whether the text is centered on the screen or placed randomly; and the background color, the text content, color, size, and font.

Text characteristics for Marquee are changed using the Format Text button in the Marquee Setup window. Choose

the font, font style, and font size from the lists available. You also can choose two effects: strikeout and underline. You'll choose text color from a drop-down list. An example of the text will appear in the Sample window to let you see how the effects look. When you've made your choices, click OK.

The Starfield Simulation screen saver lets you choose the density of stars on the screen and the speed at which you appear to fly through them. Move the slider to change the speed of the stars and use the arrows to increase or decrease the density of the stars. Flying Windows is similar, letting you choose the number of windows and the speed at which they move.

You also can activate password protection through the Setup option, which keeps the screen saver on-screen until the password is entered. (Note, however, that infiltrators can circumvent the password protection by rebooting the computer.) Click the Password Protected check box in the Setup window, then type in your password twice: once to enter it and once to confirm it. If you're changing your password instead of creating it for the first time, you'll type the old password once before typing the new one twice.

To change the length of the delay before the screen saver is activated, use the arrow buttons to change the number in the Delay box.

■ Windows 95

Win95's screen savers are also set up in Control Panel. To get to Control Panel, choose either Settings and then Control Panel from the Start menu, or double left-click My Computer and then double left-click Control Panel. Next, double left-click Display and left-click the Screen Saver tab. To select a screen saver, left-click the arrow to open the drop-down list of options. Left-click the one you want.

If you want to enable a password for your screen saver, left-click the check box for Password Protected. Be aware, though, that not all screen savers include the password-protection feature and note that users can get around Win95's screen saver by rebooting. To change or set the password, after you select that check box, left-click Change and enter the password twice, left-clicking OK when you're done. You also can determine the amount of time Win95 waits before activating the screen saver. Use the arrows to adjust the number in the Wait box.

Next, left-click Settings on the Screen Saver tab to change details like those described for Windows 3.1 screen savers. The options vary depending upon the screen saver you've chosen. Some screen savers will include password-protection options here.

If you didn't install all of the screen saver options when you installed Win95, you can add them later by using the Add/Remove Programs feature in Control Panel. Select the Windows Setup tab and left-click Accessories. Now, scroll down until you see Screen Savers and left-click it, then choose Additional Screen Savers. Insert the diskette or CD-ROM as instructed, and Win95 will add the screen savers to your system. ■

by Diana K. McLean

Which Windows?

Here's How To Choose Among 3.x, 95, And NT



A lot of users, whether they're buying a new system or considering an operating system upgrade, have difficulty distinguishing among the various versions of Microsoft Windows. With Windows 95, Windows NT, and two flavors of Windows that require MS-DOS, there's certainly no lack of choices.

Conventional wisdom may tell you to pick the newest version of the Windows family, which is Windows NT version 4.0. But newness isn't the only factor to consider. Let's look at the Windows variants and see which one might best suit your needs.

■ **Windows 3.x.** Windows 3.1 and Windows for Workgroups 3.11, which are collectively known as Windows 3.x and require DOS to run, are still alive and kicking. The main reason for their good health is the large number of PCs out there that don't have Pentium CPUs. Microsoft claims that Win95 can work on 386 machines, but it will require large amounts of random-access memory (RAM) and hard drive space.

If you're on a tight budget, the best choice is Windows for Workgroups. If you already have Windows 3.1, you can buy a Windows for Workgroups upgrade for about \$45. This Windows version runs faster than Windows 3.1 and has built-in networking capabilities. It takes up more hard drive space than Windows 3.1, and your PC should have at least 8 megabytes (MB) of RAM available. Windows for Workgroups should work just fine on 386SX 16MHz PCs through 486 33MHz PCs with hard drives smaller than 500MB.

■ **Windows 95.** As the much-awaited replacement to Windows 3.1 and Windows for Workgroups, Win95 is a compelling alternative. However, it works better with 486 and

Pentium computers. While Win95 will work on a 386 PC, you need at least 16MB of RAM to get decent performance.

If you've recently purchased a PC with Win95 already installed, there's no real reason to dump it for an earlier version. Win95, which was released in fall of 1995, is a mature enough product that most of the ugly bugs have been fixed. Those bug fixes are available in the Win95 Service Pack 1 release. You can download the service pack for free through online services or the Microsoft World Wide Web site (<http://www.microsoft.com>). You also can download it through the Microsoft Download Service at (206) 936-6735.

If you're considering dumping Win95 because someone has told you that Windows NT 4.0 is better, you may want to reconsider. Windows NT 4.0 may look like Win95, but underneath it's a very different operating system that lacks Win95's support for Plug-and-Play devices. This may make your upgrade a vexing and expensive undertaking because NT won't automatically recognize and configure new peripherals as Win95 does. Upgrades with NT can be expensive because telephone support for Windows NT is handled by Microsoft's business systems technicians. Calls to them cost \$150 per incident, and yes, you *will* pay for that with your credit card or via a 900 number.

■ **Windows NT.** There are two types of Windows NT 4.0—NT Workstation and NT Server. NT Workstation lets users share files and printers, but it doesn't provide the sophisticated network services offered by Windows NT Server.

Both types of Windows NT perform best on high-end Pentium or Pentium Pro machines with 32MB of RAM and at least 3 gigabytes (GB) of hard drive space. NT Workstation

could certainly work with as little as a 1GB hard drive, but if you try running it on such a system, you may, like Win95 users, quickly find yourself wanting more hard drive space.

Designed for corporate business networks, Windows NT performs very well for its business users on servers, desktops, and portable PCs. For home users, however, many of the features that make it a dynamite business system are definitely overkill.

Although Windows NT 4.0 now looks like Win95, it does not support as many peripherals as does Win95. This means adding new hardware will require some time-consuming searches for Windows NT device drivers for your peripheral devices.

■ **Which One?** For small offices and home use where standalone machines are used, Windows for Workgroups and Win95 are good choices. These provide good performance, and if you decide to network a few computers, the right software is already built-in. Small networks of up to 10 PCs would benefit from either Windows for Workgroups or Win95. If you frequently use DOS applications, then Win95 offers some excellent configuration options, even for memory-hungry DOS programs.

If network security is a concern, then Windows NT Server could greatly shore up your defenses against snoopers. Windows NT Workstation provides the best security for standalone machines. The only catches are possible support problems and hardware upgrades with peripherals that don't have Windows NT device drivers.

With these facts in mind, it should be clear that the best Windows version is the one that offers the features you need at a price you can afford. ■

by Bill Hayes

- The fastest V.34 standard modem available at 33.6kbps — the new speed standard.
- Prices start at just \$99* for internal and \$149 for external modems.
- Includes "Internet Access Solutions" CD-ROM and limited lifetime warranty.

Now you can forget about your slow modem and start walling on the Internet with a minimum of set-up time. Our new 33.6kbps modem is loaded with features that make installation simple, like automatic modem verification and an integrated install that handles all your software setup. So don't let fear of installation keep you from faster, more efficient Net access. Call your nearest Cardinal reseller or distributor today. For more information call 1-800-775-0899 ext. 675, or visit us on the Web at: www.cardtech.com

SCREAM WITH YOUR PC, NOT AT IT.

Introducing The Cardinal 33.6 Data Fax Modem. So easy to install, it's scary.



*This model does not include the "Internet Access Solutions" CD-ROM
™/® - these trademarks are the property of their registered owners.


Cardinal
a member of THE PCI GROUP

7.9 billion miles of open highway
and you've got TotalAccess.™



\$19.95 flat rate.* Unlimited Internet mileage.



The coolest, easiest Internet access on Earth.

Every account includes E-mail and a free 2 meg Web site.

Call now for your EarthLink Network TotalAccess™
software with Netscape Navigator™ 2.0.

1-800-395-8425



Internet access in over 290 cities in the U.S. and Canada. Software for MACINTOSH, WINDOWS, WINDOWS 95, featuring Netscape Navigator 2.0. EarthLink Network is one of the largest Web space providers in the U.S. and also provides ISDN, Frame Relay, T1 and other Internet services. *There is a one-time set-up fee of \$25.00. Prices for Canada are different.



EarthLink Network, Inc. 3100 New York Drive, Pasadena, CA 91107 Fax: 818-296-2470
Info via email: info@earthlink.net Live human via email: sales@earthlink.net Visit our Web site at <http://www.earthlink.net>

Copyright © 1996 EarthLink Network, Inc. All Rights Reserved. Trademarks are property of their respective owners. Netscape Communications, Netscape, Navigator and the Netscape Communications logo are trademarks of Netscape Communications Corporation. © 1996 PhotoDisc.



Next Year's Tech Overload

A SURVIVAL GUIDE

Each year, the computing world touts several technological advancements as revolutionary. Manufacturers and marketers want you to think you can't get by without these new products or add-ons. Some of these, such as the CD-ROM drive, did swiftly become a necessity. Others, such as Apple's Newton and other personal digital assistants (PDAs), are still struggling to make themselves useful. And still other big-name products, such as Windows 95, fell on middle ground, presenting a welcome change for some users and the threat of too many headaches for others.

So how can you tell whether that shiny new operating system or astounding new peripheral is truly revolutionary or simply revolting? Unfortunately, most of the time you can't. The barrage of hype funded by giant corporations and presented by slick marketers can be difficult to see through. The best thing to do is be patient. Wait until the lines for the sleek-looking home PCs and accessories die down and see what your friends and neighbors think of them.

But in case your patience is wearing thin and you're eager to learn more about developments that will impact our lives over the coming year, we've compiled a guide to help you survive this technology overload.

A sort of What's Hype and What's Hip, if you will. We'll peel back that glossy covering and see whether what's inside lives up to our expectations—be they good, bad, or even great.

■ **A New Standard.** Adding new peripherals such as printers, CD-ROM drives, and modems to a PC has always been far from easy. It involves tasks such as setting modem jumpers and resolving interrupt request line (IRQ) conflicts. The process seems more like "plug and pray" than the famous "Plug and Play," which is supposed to make adding devices as easy as inserting cartridges. But developments in this area, heavily hyped in recent years, should finally live up to their oft-exaggerated claims.

Plug and Play? Win95 itself was supposed to resolve these installation difficulties. With its own brand of Plug and Play (PnP), the Win95 Add New Hardware Wizard scans your system for recently added peripherals and then installs the device drivers for them. Drivers are programs that let your central processing unit (CPU) communicate with your peripherals. Unfortunately, the Wizard's magic

was often dispelled by the fact that many peripherals weren't designed with PnP in mind, the computer's motherboard itself wasn't PnP-compatible, or the user had made changes to the IRQ or other system settings.

But recently, more and more products are PnP-compatible. When you're shopping for new peripherals, take a second to make sure they say as much on the box. If the Wizard lines up with a PnP peripheral, you probably won't be able to pull a rabbit out of your hat, but hopefully you won't be so frustrated you'll attempt to make your PC disappear.

Universality. Even more promising is the new hardware bus standard that is making a strong showing in some computers now and should be standard in all computers sold early next year. A bus is a piece of hardware in your PC that connects your central processing unit (CPU) to your peripherals. The new Universal Serial Bus (USB) is just that—universal.

The USB standard means true plug and play. Just hook up a peripheral to a USB port, and it is configured automatically. No taking off the cover, no messing around with internal settings; you don't even need to turn off the computer. And USB devices can be daisy chained together—that is you can hook up one to another, and then to another, etc (up to 127 total).

Ease of installation has plagued computer users since the dawn of the home PC. It looks like we finally have a cure.

■ **Nothing But 'Net.** If anything has been the recipient of overhype, it's the Internet. From Microsoft's "Where do you want to go today?" commercials to declarations of being a social and political equalizer, the Internet has struggled to even come close to fulfilling these claims. The potential is there, but it has so far gone unrealized.

'Net TV. In order to capitalize on this hype, developers have tried to make Internet access as cheap as regular home entertainment equipment. Not everyone wants a \$2,000 PC, but most everyone would shell out \$200 to \$500 for an Internet machine. At least that's what manufacturers of the new 'Net boxes are hoping. These devices, such as ViewCall America's WEBster (\$300, 770/729-2929), sit on your television like a cable box and let you surf the World Wide Web from the comfort of your easy chair.

There are other 'Net machines out there. Some are simply reconditioned 286s with a modem shoved in. Others are add-ons, such as the NetLink for Sega Saturn, allowing you to go online between games. All of these devices are indicative of the future, where most every appliance will be tied to the 'Net. But this won't happen for at least a couple of years (until the bandwidth problem is solved; see below). 'Net boxes and other Internet appliances could find a niche with people who want to send E-mail and hang ten on the Web but have no desire for an entire PC. But they won't be creating any 'Net revolutions.

Java. One of the bigger Internet buzzwords lately has been Java. This hardware-independent programming language could potentially unite the computing world. Java "applets" travel over the Internet and can run in any Java-enabled browser, a program used to access the Web such as Microsoft Internet Explorer or Netscape Navigator, on any type of computer.

These applets are currently used as fancy ways to soup up a Web page, but they could be written as word processing programs, spreadsheets,

or anything. Users could access applets online, using them only when necessary. Java has the potential to change the face of software as we know it. With rentable applications available at the touch of a button, there would be no need to buy an entire CD. But Java applets big enough to do anything more than wave a flag on an otherwise mundane Web page are held back by limited bandwidth.

The Bandwidth Played On. Bandwidth is the amount of information that can travel between two places over a network. Most users access the Internet through phone lines, whose bandwidth peaks at around 33,600 bits per second (bps). The newest modems max out the phone line potential. There are new

pseudo-modems that may be able to nearly double this current limit (see "Life After Modems" sidebar), but most likely, other options should be considered.

Integrated services digital network (ISDN) lines already run to almost every home in the country, and they can transmit data at more than 100 kilobits per second (Kbps). Unfortunately, even if the lines are there, it still costs at least \$200 for a terminal adapter, the ISDN version of a modem, and then a minimum of \$40 to \$50 a month for the service. And ISDN is still not fast enough for the more advanced uses of the Internet, such as videoconferencing. But prices should drop substantially over the next year, at least giving users a

faster connection option.

Other high-speed solutions, such as cable modems, T1 and T3 lines, and the new xDSL (digital subscriber lines), show incredible promise but won't be seen on any wide, consumer scale anytime soon. Offering speeds of up to 200 times faster than current phone lines, these options would go a long way toward providing unlimited bandwidth. But don't hold your breath. If you want extremely high bandwidth during the next year, it'll cost you plenty.

The Internet itself will undergo some major changes in the next year. It will become more organized on a local and global level (witness the arrival of new community sites, such as Microsoft's Cityscape). It will continue to attract more people. It will provide new ways for users to meet others, download software, learn about anything, and share what they know. But it won't get much faster; in fact, without higher bandwidth and with more people logging on every day, it will most likely slow down. There's little threat of a crash, as some pessimistic prognosticators are predicting, but it won't be the painless paradise of Microsoft commercials for several years to come.

■ **Software?** Many programs have undergone minor transformations in order to mesh themselves with the Internet. Presentation software lets you post directly to your

Will Color Lasers Be Affordable?

A couple of years ago, inkjet printers revolutionized the printing industry, from the manufacturer all the way down to the consumer. With these printers, the average user could get near the quality of a laser printer, and for a fraction of the price.

Now, a majority of computer owners has a color inkjet printer. It can't get a lot better for the home user, in terms of price. That's why you shouldn't look for too many revolutionary developments during the next year. But there will be the steady increase of quality and decrease in price that is quite unique to the computer industry.

With the proper equipment and paper, the quality of most printing can increase substantially. Most of the higher-end color printers offer near photo-quality printing. (See our review of Hewlett-Packard's DeskJet 693C in this issue.) Photo-quality will be the banner mark for the next 12 months.

Another option for improvements in printing is the color laser printer. This has always been the big dog, a machine capable of producing laser-quality documents in color. And don't look for things to change. Prices have dropped quite a bit, but the lowest-end color laser printer still costs at least \$5,000. This should drop over the next year, but the tag will stay well out of range for the average consumer. □

Web page, and word processors have E-mail capabilities built-in. It's clear the Web is weaving its way into the heart of software. This will become very evident this year, most obviously in operating systems (OS) tying themselves to the 'Net, and downloaders threatening the livelihood of software vendors.

Downloading. Internet bandwidth may still be too narrow for video- and graphics-intensive activities, but it's still much greater than ever before. A large file (five to 10 megabytes) can be downloaded usually in less than an hour with a 28.8Kbps modem. **Downloading** is the transfer of files or information from another computer on the 'Net to your own. An attempt to move a file this large over phone lines two years ago would have been futile, perhaps even crazy.

This ability to download program-sized files has opened another door for software manufacturers. Instead of packaging the program on diskette or CD-ROM, manufacturers can eliminate the middleman by having users download it directly from the company Web site. Users even can download an encoded version of the software (such as an incomplete shareware version) and then pay for the registration code if they like it.

This is no longer hype; it's completely hip. If you have a decent Internet connection, you've probably already downloaded your share of shareware. And this will continue to grow during the next year, benefiting users with free trial versions and lower software prices.

Internet OS. Desktop changes are on the way. Win95 was hyped to the hilt and managed to live up to most of it, although many people chose to stick with the reliability of Windows 3.1. Microsoft hopes to lure more users with upgrades to Win95 that will make it integrate more seamlessly with the Internet. The new interface will seem more like a browser than a desktop. If Microsoft can make these upgrades available before '98, they should be worth trying out.

Another operating system taking a similar approach (and already released) is IBM's OS/2 Warp 4.0. IBM shows that it's still ready to give Microsoft a run for its money by building in Java capabilities, the ability to drag and drop files from the Internet to your desktop, and Remote Support (allowing technical support to dial in to your computer and make repairs) right into the OS. Unfortunately, unless Warp solves some compatibility headaches

Life After Modems

Modems (short for MODulator/DEModulator) take a computer's digital signal and change it to an analog signal that can be sent over the phone line. Another modem on the other end changes that analog signal back to a digital one. Using this method of transferring information over phone lines, a maximum limit of 33,600 bits per second (or 33.6 kilobits per second, Kbps) applies.

Rumors have been flying around recently about modems capable of achieving an information exchange rate of 56Kbps—almost double the supposed maximum speed. The theories behind how these modems could offer this transfer rate are fairly complex (when is circumventing theories of physics not complex?), but it pretty much boils down to the customer having a special modem-like machine that plays off a purely digital "modem" at an Internet service provider (ISP). The customer's modem device would work like a standard 28.8Kbps or 33.6Kbps modem with a normal Internet connection. But when it is hooked up to the special digital connection at the ISP, it offers up to 56Kbps downloading and around 23Kbps to 28Kbps uploading.

These modems should be fairly inexpensive (in the price range of current modems), since they will work on a standard phone line. They will be very big next year—any kind of bandwidth expansion for less than huge dollars will be very big in the coming years—especially in areas that are not currently reached by Integrated Services Digital Network (ISDN) lines.

Digital simultaneous voice and data (DSVD) technology will soon become standard on modems. This lets users transmit data and speak to others at the same time, on the same phone line. DSVD users are already taking advantage of the technology by discussing on-screen diagrams with business partners and talking to opponents in networked games.

ISDN, cable modems, and xDSL (digital subscriber lines) will start to make a showing over the next year in major cities, providing high-speed access to limited areas for an equally high price. ISDN is spreading, but other and costs less. It is not as fast as cable modems and xDSL, but it will still provide rates of 100-Kbps and will be the one to watch toward the end of next year.

and manages to expand its user base, it may be more of a short jog.

Microsoft has been pulling hard for its NT 4.0, since Win95 failed to garner much of a business audience, and rightly so. Computer crashes are frustrating for home users, but they can be devastating in a work environment. Unlike other versions of Windows, NT's built-in security keeps errors in different applications from affecting each other, making it less likely to crash. NT 4.0 promises to be faster, easier to use, and just as stable as NT 3.51. If it holds true in these regards, most businesses will be making the upgrade during the next year.

■ **PC Makeover.** Computers are in the midst of a metamorphosis. We are at the edge of the phase where our PCs will soon become

an integral part of our homes—not as another appliance, but as a central appliance. Television, VCR, telephone, stereo, even kitchen gadgets will be linked to the computer.

All in one. PCs like Gateway 2000's Destination are attempting to incorporate all of this right now. The Destination comes with a 31-inch monitor that also functions as a big-screen television; a stereo receiver with surround sound and six speakers; and hookups for your VCR. The remote control and wireless keyboard make it suitable for couch computing. But we don't think most people are ready to have their computers in their living room. The first line of all-inclusive machines should be given extra scrutiny. Before you shell out a few thousand bucks for something that will take up most of your living room,

make sure it meets your needs better than a traditional computer.

Storage space. A computer's hard drive is still the primary method of storing information, and it's not going anywhere soon. The two gigabyte (GB) drives that are the standard for the end of this year will most likely double or triple in size in the coming year. But there are other storage options just around the corner.

One of the biggest peripherals for the PC in recent years has been the CD-ROM drive. This device went from nowhere to everywhere. But its reign may be as short as it is powerful. As much space as a CD-ROM holds, it's not enough—and it's one way. You can read the discs, but you can't write to them.

CD-Recordable drives are falling in price (as low as \$600), putting them in consumers' range. At around \$5 each, the 650 megabyte (MB) discs are extremely cheap. Unfortunately, these can only be written to once. CD-Erasable drives have a better chance, providing a 650MB medium that can be used repeatedly. But the big one to watch in the coming year will be Iomega's Zip drive. This drive writes and reads from 100MB cartridges, but it won't

be ubiquitous just because of how useful it is or how inexpensive it is (\$199, extra cartridges \$15). Iomega has been pushing its Zip drive extensively, making deals with five major computer manufacturers, ensuring that it will be seen in most of the PCs sold next year.

One medium to watch is the Digital Video Disc (DVD). With discs capable of holding between 4.7GB and 17GB of information, an entire movie can be contained on a DVD drive that may be as cheap as \$500 when released. Unfortunately, few titles will be immediately available for the smaller discs, and like normal CDs, the first DVDs will be read-only. This should give the Zip drive time enough to establish a strong hold that will carry it through the year.

■ **Not Just Skin Deep.** Some of the most impressive changes to next year's PCs will not be on the outside. From three-dimensional (3-D) capabilities to Intel's MMX, most of the changes will be in multimedia. But that's what we like.

In 3-D, We want our computing experience to be as close to real-life as possible. Our appetite for realistic games, education, and other activities has been whetted. We

need 3-D. Three dimensions in computing terms is a bit different than in life or Captain EO. Images don't pop out of the screen at you. But they do appear to have more depth.

3-D technology will most likely be ruled by, yep, you guessed it, Microsoft. The heavyweight's Direct3D software interface, available at year's end or in early '97, allows any 3-D program to be compatible with any 3-D processing chip. This standard will allow 3-D technology to lead us through the next year by a hand we can almost feel.

VRML. Just when you were getting a handle on all those Web acronyms, Virtual Reality Modeling Language (VRML) jumps out at you—literally. VRML is a standardized code that describes 3-D shapes to your VRML-enabled Web browser. VRML is used to create online worlds such as AlphaWorld (<http://www.worlds.net/alphaworld>) that can be explored through the control of avatars, which are 3-D representations of users. These worlds are sluggish right now, but with faster connections and more powerful processors, they will become the first stages of universal virtual reality.

Scanning The Imaging Options

Scanners, the most popular digital imaging devices for PCs, have changed substantially in their short existence. When they first projected themselves onto the scene, they were flatbeds—miniature copy machines that took up a lot of desk space. Now consumers have a choice. Tiny, inexpensive handheld scanners have improved in quality, making them a viable option. And sheetfed scanners have found their niche in the business world.

Not a lot can change in the scanning industry. Scanned color images will get a little sharper, prices will drop a little lower, more PCs will have scanning capabilities built in (such as the 5- x 7-inch scanner in the Hewlett-Packard Pavilion), but drastic changes aren't on their way. There is only one aspect of scanning that even needs major improvement—**optical character recognition (OCR)**.

OCR has been the dream of transcribers everywhere. This software reads letters (handwritten or typed) on a scanned document and transfers them into a word processing file. Unfortunately, this technology is still lacking. Performance is in the high 90s as far as percentage of successfully recognized characters, but that's not good enough. In the year to come,

the rate should close in on a perfect 100%, especially since this is one of the main uses of sheetfed scanners. (See the review of Visioneer's PaperPort Vx in this issue.)

The input device with the most potential this year is the digital camera. Instead of holding film, these cameras have random-access memory (ROM) space that will hold images temporarily. These images then can be transferred to your PC and printed out. With a photo-quality printer, you can develop your own high-quality pictures. Prices for these cameras have dropped considerably in the last couple of years, but they are still a bit high. As they continue to drop, you'll see a lot more of these dangling from the necks of tourists. (See the review of PhotoPC in this issue.)

PC video cameras also are improving their image. Connectix, the makers of the Quick Cam, an inexpensive globe video camera, have released a Color QuickCam. (See the review of QuickCam in this issue.) The neatest use of these cameras is home videoconferencing, but with bandwidth strangleholds continuing to choke graphics-intensive activities, this won't be expanding much over the next year. But the lower resolution of cameras like these makes them a cheaper (in terms of price and quality) option to the digital cameras. □

Sounds like. The technology for 3-D sound has been around for a while but hasn't become the standard. Watch it do so next year. Some of this fall's computers such as Compaq's Presario are already sold with 3-D sound built in.

This differs from Dolby Surround Sound, which creates the illusion of being engulfed by audibles by using different channels of sound sent to middle, side, and rear speakers. 3-D sound uses a variety of frequency shifts to trick listeners into thinking the sound is coming from all around and is more effective on mobile listeners than Dolby.

Another way to improve what you hear from your computer is how it synthesizes sounds. Most PCs use **FM synthesis**, a generic way of creating sound with a distinctly computerized tone, and 16-bit sound cards. **Wavetable synthesis**, on the other hand, plays samples of actual musical instruments to create sounds. Wavetable synthesizers and higher-quality, 32-bit sound cards will be what you're listening to this time next year.

MMX. If there was ever an argument for waiting to buy a new computer, MMX is it. This multimedia extension set will be built into Intel's new line of CPUs and should provide up to a 300% increase in graphics and audio performance. MMX will run best with software that is designed to take advantage of its capabilities. But by the middle of next year, most programs will probably be written with MMX in mind. If you're thinking about buying a new PC in the next year, you want to think hard about this one.

Processing. While MMX is the most exciting processor attribute coming out next year, the rest of the CPU industry shouldn't be boring. As usual, Intel is fighting to keep up with Moore's Law, a theory stating that CPU speeds will double every 18 months, while at the same time, prices halve.

As if sensing that Intel may not be able to keep up with this rate on its own, two companies have given it a kick in the pants. Cyrix Systems and Advanced Micro Devices (AMD) have joined the fray, armed with their own chips that perform as well as Intel's, and for a lower price. Even with the competition, Intel should stay on top, crushing its opponents with its P6 Pentium Pros, which should have clock speeds pushing 300 megahertz (MHz) by the end of '97.

■ **Keep It Moving.** In search of an expanded user base, the lower-end models of portable computers have undergone some major changes recently. These models, which are geared more toward the home user, have seen more attention from the manufacturers, producing portable Pentium-based machines for less than \$2,000.

Now that this audience's attention has been captured, manufacturers will continue to improve their lower-end models, hopefully presenting notebooks with 200-MHz Pentium Pro CPUs by the end of next year.

Portables have always lagged behind desktops in processor speed, but they will continue to demonstrate that anything you can do from a desk, you can do on the road.

■ **Who Cares?** So what does this all mean for the user? How will you be affected by the

changes in the coming months? That's pretty much up to you. If you're satisfied with your current computer, next year should mean little difference for you. You'll still be able to use the same programs, surf the same Web, play the same games. You even should be able to run most of the new programs, albeit not to their full potential.

But if you're looking at keeping up with the times and having the latest technology, then the next 12 months will present a lot of different choices for you to look at. Our original advice is still the best: Be patient, research what you hear, and if you can, ask someone who's already tried out the new technology. ■

by Joel Strauch

Monitoring Change

It's ironic that the part of the PC that we spend the most time looking at is usually the recipient of the least amount of our attention. When monitors are working well, not fuzzy or blinking, we don't tend to notice them at all.

Over the last few years, high-resolution Super VGA (video graphics array) monitors have become the standard. Resolution, refresh rates, dot pitch—all things that don't mean much to us except how little we end up noticing the screen in front of us—will continue to increase and give us an image that's even sharper.

Amounts of **video random-access memory (VRAM)** also will continue to increase. VRAM helps process memory-hungry video images. Having two megabytes of VRAM on a system's video card is high-end right now, but as users process more graphics and video on their PCs and begin to use more powerful **video acceleration cards**, this amount will swiftly become the minimum. A video acceleration card helps your monitor run video-rich programs more effectively, and the more powerful they are, the more VRAM they need. By the end of next year, standard monitors will be able to run video as flawlessly as a television.

The most noticeable change in monitors will be in size. Standard monitors range from 14- to 17-inch (measured diagonally—usually actually around an inch smaller than the manufacturers claim), with larger 21-inch models available. Gateway 2000's new Destination line come standard with a 31-inch monitor. As resolution and other video capabilities increase, size will as well. Unfortunately, this means that the aspect of monitors that most needs to change—the price—will probably remain stagnant. □

Holiday Gift Guide



When you're shopping for gifts (either for others or yourself), the hardest part is often seeing what's out there and matching recipients with the perfect gift. If shopping time were unlimited and every product available in your town, that'd be no problem. But as

the holidays creep closer, there's scarce time to check out the options. Fortunately, if you're buying computer products this year, you've got the PC *Novice* super browsers on your side. We tested hundreds of products this year, and in this guide, we tell you

about the ones that most impressed us. From mystery games to music programs to wireless keyboards to Web browsers, we highlight the products you should consider. If you're looking for that perfect sweater, well, you'll have to keep looking. ❧

Voyage Through The Bible.....	28
Microsoft Golf 3.0.....	28
Quantum Bigfoot.....	29
Print Shop Deluxe III.....	29
Seashore.....	29
SureLink Travel Connection Pack.....	30
Microsoft Flight Simulator.....	30
Microsoft 3D Movie Maker.....	30
Snoopy's Campfire Stories.....	31
The Ultimate James Bond.....	31
GAMEjammer PC Card.....	31
Nikon Scantouch 110.....	32
ForeFront's WebWhacker.....	32
VirusScan.....	32
DeskJet 693C.....	33
Learning Advantage Library.....	33
Netscape Navigator 3.0.....	33

Oil Change.....	34
NetMailer.....	34
Hayes Accura 33.6.....	34
Microsoft FrontPage.....	35
Microsoft Greetings Workshop.....	35
Starfish Internet Utilities.....	35
Iomega Zip Drive.....	36
Microsoft Encarta '97 Encyclopedia.....	36
Where In The World Is Carmen Sandiego?.....	36
AverMedia FunTV Capture Board.....	37
Cinemania 97.....	37
Monty Python.....	37
Flight Stick Pro.....	38
PointCast Network.....	38
Rand McNally TripMaker.....	38
In The 1st Degree.....	39
Little Golden Books Interactive Stories.....	39

PaperPort Vx.....	39
Lifetime Touchpad Wireless Keyboard.....	40
Hanes T-ShirtMaker & More!.....	40
Picture It!.....	40
Autoscore.....	41
Power2Play.....	41
Mindscape Home Office Assistant.....	41
Surfman.....	42
You Don't Know Jack.....	42
Smart Label Printer Pro.....	42
QuickCam.....	43
PORT In-Car Charger.....	43
Quake.....	43
PhotoPC.....	44
Microsoft Publisher 97.....	44
Quicken Financial Planner.....	44

Charlton Heston's Voyage Through The Bible: Old Testament



Students of the Bible, young and old alike, will find this program both educational and entertaining. Charlton Heston narrates various areas of the program, including stories from the Bible, descriptions of Scriptural journeys, and explanations of historical events in Biblical times.

This CD-ROM goes beyond a simple reference tool. It includes video tours (guided by Heston from his Land Rover) of sites important to Bible stories, such as Egypt, Mesopotamia, and the Holy Land. There is also a full King James Bible text of the

Books of Moses that you can read at your own pace, a Dictionary of biblical terms and names, art relating to the Bible, and, of course, Heston's dramatic readings of the stories of Creation, the Garden of Eden, the Flood, and the Exodus. There are links among the various elements of the program, letting users follow where their interest leads instead of just following the order of the stories.

The interface is simple and easy for even children to use; users just click icons representing different parts of the program. There's also a wonderful soundtrack that includes a wide variety of classical and inspirational music.

A New Testament CD-ROM is available for the same price. ❧

Price: \$29.95
Jones Digital Century
 (800) 435-7390
Fax: 802-864-9846
http://www.digitalcentury.com

Microsoft Golf 3.0



Lots of people would agree that the only thing bad about golf is that, in many parts of the country, the playing season can seem pretty short. How can players get a fix while snow covers the ground? Fortunately, Microsoft offers golf fiends an electronic alternative with the new *Golf 3.0* for Windows 95 and Windows NT.

We had a chance to play the beta (or pre-release) version of the game, and while it was still a little rough around the edges (betas often are), it looks pretty good. Once we looked back at version 2.0, the advances in this CD-ROM became more obvious. The latest *Golf* has a more user-friendly interface and an easier-to-understand toolbar. Another big advance is the quicker play, which means less time spent moving from shot to shot.

Of course, Microsoft left in all the good stuff from the last version. You still can choose the type of weather, as well as the course conditions. You also can pick whether to allow muligans and gimmies in your game. And you still get all the tips, lessons, and demonstrations you need to get your game up to par.

The game also has "enhanced multiplayer functionality." That means you can form a foursome with players connected through local-area networks (LANs) or modems. So even when 20 miles and a blizzard separate you and your fellow duffers, you still can get in a game. ❧

Price: \$44.95
Microsoft Corp.
 (800) 426-9400
 (206) 882-8080
http://www.microsoft.com/sports/golf/default.htm




Quantum Bigfoot

Just like its legendary name-sake, Quantum's Bigfoot has a big reputation, but there's nothing mysterious about the Bigfoot hard drive's fame. It's proven itself as a great way to store information inside a PC. Quantum offers the drives in two sizes—1.2 gigabytes (GB) and 2.5GB.

While there is a lot of talk about alternative storage devices and newfangled diskette drives, there's no replacement for a new hard drive if all you crave is

installing more programs on your PC. The reason is the speed at which hard drives operate. The Bigfoot drives can transfer data at about 16 megabytes (MB) per second. That's lightning quick when compared to the maximum 1.4MB transfer rate of an alternative storage device such as Iomega's Zip drive.

You can add the Bigfoot as an additional slave drive to your old hard drive or replace the old drive outright with a new Quantum unit. Bigfoot drives can fit in an ordinary 5.25-inch internal drive bay, which is the same size as most internal CD-ROM drives. The Bigfoot is also compatible with several storage

interfaces that deal with hard drives, including the Integrated Drive Electronics (IDE) interface, Enhanced Small Device Interface (EIDE), and Fast AT Attachment-2 (Fast ATA-2) interface. It requires a system with at least DOS 5.0 or newer. 



Price: \$179 (for 1.2GB), \$229 (2.5GB)
Quantum Corp.
 (800) 624-5545
 (408) 894-4000
<http://www.quantum.com>

Print Shop Deluxe III




Looking good in print looks pretty easy when you use a package like *Print Shop Deluxe III*. This desktop publishing program gives you a jump start on creating a wide range of projects, from cards and calendars to posters and stationery. It includes more than 4,500 graphics, 73 TrueType fonts, and thousands of special text and graphics effects for incorporation into your printing projects.

There are also more than 500 ready-made projects and hundreds of professionally designed layouts that can help out when you don't feel up to creating a design from scratch. All you have to do is choose a category

such as Greeting Cards or Stationery, then choose whether to Customize A Ready Made or Start From Scratch. From there, *Print Shop* offers a series of design choices to get you started and lets you add your own elements to the project.

You'll choose elements such as backgrounds and layouts from options in dialog boxes, then move to the main window to edit the design and add text and graphics. Adding items is a simple process; click a placeholder in the layout and choose Edit from the Object menu.

Print Shop Deluxe makes creating projects so easy that you'll soon find yourself using it for all kinds of things: birthday cards, letterhead for personal or small business use, even posters or banners for special events. Only your imagination limits the possibilities. 

Price: \$29.95
Broderbund Software Inc.
 (800) 521-6263
 (415) 382-4400
<http://www.broderbund.com>

One Small Square:

Seashore


If you've got a little mermaid or an aqua-boy in your family, they'll probably flip for this CD-ROM. It takes kids on a three-dimensional (3-D) tour of a tiny section of the seashore. Inside that section, they'll find everything from deep water to shoreline and all the creatures that live in-between. Youngsters use the magnifying glass cursor to click objects that appear on-screen. The clicks bring up different animations, narrations, and video clips.

Once kids get bored with the 3-D portion of the tour, they can wander through a nature guide with even more underwater information. And afterwards, there's a journal where they can record their experiences and place pictures they've taken along the way.

Of course, companies can't put out a CD-ROM today without throwing in a game or two, and they're in here. Youngsters can play the role of a hungry gull or a lost little crab. There's also a matching game and a hunt for camouflaged creatures.



Finally, there are nine real-life experiments for young Cousteaus to print and take along the next time they visit a real seashore.

The press materials say this product is for boys and girls ages 6-12. We think children on the younger end of that scale will probably get the most enjoyment out of this simple-to-use and inexpensive package. 

Price: \$34.95
Virgin Sound and Vision
 (800) 814-3530
 (310) 246-4666
<http://www.vsv.com>

SureLink Travel Connection Pack



Are you a high-tech, globe-trotting, Internet-connected, big

business-type person? We've got the perfect product for you; the SureLink Travel Connection Pack provides you with the telephone and power connections you'll need to help your portable computer tap into phone and power lines when you're in a foreign country making power deals.

Even those of you who aren't Fortune 500 execs could find yourself in need of such a pack as well.

Microsoft Flight Simulator



Like Windows 95 itself, Microsoft Flight Simulator for Windows 95 incorporates higher production, better quality, and a greater challenge than its predecessor. The original Flight Simulator for Windows, the world's longest- and largest-selling civilian aviation computer simulation ever made, has been taken to yet another level.

Novice pilots can take lessons on their own or with a demanding flight instructor who berates them for making mistakes and praises them for carrying out his instructions to the letter. Experienced virtual pilots can skip the lessons, jump right

behind the wheel of a Boeing 737, and burn the engines to make that difficult climb to 30,000 feet.

There are various flight categories, including a huge Pilot's Help section that contains a library of flight school manuals, airplane handbooks, preflight briefings, and a Using Flight Simulator section with an index.

Choose from six different aircraft, including two that are new in this version—the 737 and an Aerobatic Plane Extra 300. You even can fly Snoopy's old favorite, the Sopwith Camel.

Flight Simulator's graphics are good. Users can soar past classic landmarks and buildings such as Chicago's Sears Tower, the Statue of Liberty, the Eiffel Tower, and the Golden Gate Bridge in San Francisco. With 300 airports and 35 different flying challenges, this product will surely keep you in the virtual sky for years to come.

Price: \$59.95
Microsoft Corp.
 (800) 426-9400
 (206) 882-8080
<http://www.microsoft.com/catalog/products/FltSim/default.htm>

From college students spending several months studying abroad to a couple taking their long-awaited vacation to the City of Love, many of us eventually make it overseas.

PORT makes three separate SureLink Travel Connection Packs for use in different regions of the world: Europe, Asia-Pacific, and Pan-America. Each pack includes a set of telephone and power adapters that should cover all the bases, no matter what city or nation you end up in within the region. You store all the adapters in a sturdy carrying case that has an internal sponge casing to keep everything in one piece. We should point out that the power adapters are just that: adapters that make foreign

outlets accessible to your computer. They DO NOT convert power, so before you use one, make sure your computer can handle the voltage coming out of the socket in whatever part of the world you're visiting.

When we decided to review this product, we thought it would be prudent to try out all of the different travel packs PORT offers. So we asked our bosses to pay for staff trips to all three regions. They said "no," so we were unable to field-test this product. Bummer.

Price: \$99.95 to \$199
PORT Inc.
 (800) 242-3133
 (203) 852-1102
<http://www.portinc.com>

Microsoft 3D Movie Maker



also can add titles and logos to movies and add special effects such as movement on those elements. With a microphone, kids even can record their own music and dialogue to add to the movies.

The quality of graphics and sound in 3D Movie Maker is much higher than in the other animation products we've seen. The only drawback is that this software runs only on Windows 95 or Windows NT 3.51 or newer.

Watch shelves for Microsoft's Nickelodeon 3D Movie Maker, a new version of this popular program, which was being finished at this writing and was scheduled for an October release. The new package will feature characters from popular Nickelodeon shows.

When we reviewed a pre-release version of this product last fall for our *Guide To Selecting Software*, it impressed us even in its unfinished state. We're even more impressed now that we played with the completed product. Though designed for kids, it's fun for adults, too.


3D Movie Maker is far more than a simple animation program. As its name implies, it lets kids create movies by combining backgrounds, camera angles, actors, costumes, props, speech, music, and sound effects. There are ample choices in each area. For example, there are more than 30 actors to choose from. Users

Price: \$44.95
Microsoft Corp.
 (800) 426-9400
 (206) 882-8080
<http://www.microsoft.com/kids/3Dmovie.htm>

Snoopy's Campfire Stories

ones in which they want to participate.

These activities go beyond fun; they should teach kids something as well. For example, when the group tells stories, Snoopy types them into his portable computer. The typed words appear on the bottom of the screen, and the kids learn to associate the spoken words with written ones. Other activities include letter writing and games such as model boat racing.

This is a well-crafted CD-ROM that should teach kids a thing or two, while introducing them to the world of computers as well as a few of your old friends. 

Price: \$29.95
Virgin Sound and Vision
 (800) 814-3530
 (310) 246-4666
<http://www.vsv.com>

GAMEjammer PC Card

Today's portable computers can do just about anything a standard desktop PC can do. The average portable has lots of random-access memory (RAM), plenty of storage space on the hard drive, a fast modem, and a decent-sized display. Some even

have a CD-ROM drive or will accept one externally. With all these tools, it seems average portable users have everything they could possibly need.

Make that *almost* everything.

For any home computer user who has switched from a desktop

PC to a portable computer, there comes a day when they realize, to their horror, that there's just nowhere to plug in a joystick on most portable computers. Sure, they couldn't get the portable computer for word

The Ultimate James Bond: An Interactive Dossier


Polish up your best British accent, find your classiest clothing, mix a martini (shaken, not stirred), and get ready for an interactive ride with the master of intrigue and suspense. It's Bond, James Bond.

The experience of *The Ultimate James Bond: An Interactive Dossier* truly delivers for 007 fans. You'll see Bond's evolution, from the early Sean Connery years to the '90s style of "Goldeneye's" Pierce Brosnan. It chronicles writer Ian Fleming's creation—the Missions, the Allies, the Villains, Bond's women, and even a look at the cars and weapons that made the finest agent in Her Majesty's Secret Service famous.

You can view choice movie clips, from the electrocution of Goldfinger henchman Oddjob to Bond's classic battle with the steel-toothed giant Jaws in "The Spy Who Loved Me." You'll see

still photos of famous Bond women such as Ursula Andress, Maude Adams, and Jill St. James while listening to sound bites of some of 007's most famous lines.

Delve into a trivia game that ascends skill levels as your knowledge improves. In which film does Jaws convert to a hero and save Bond's life? How did Bond's parents die? By the time you finish this exam, you'll know the answers.

This action-filled encyclopedia-type product doesn't just profile the differences in the movies; it profiles key current events at the time each movie was made. The product provides more than just surface information for select Bond trivia buffs; it provides a walk through history as well. 


Price: \$39.95
Micro Interactive
 (800) MGM-5808
 (708) 799-2350, ext. 007CD
<http://www.mgmua.com>

processing and stuff like that, but they didn't think they'd have to give up the *Tie Fighter* game and their beloved joystick in the deal!

For all the folks who've experienced this kicked-in-the-stomach feeling, we suggest New Media's GAMEjammer PC Card. The company calls it a game/sound card, and it features its own tiny built-in speaker (and headphone jack) as well as a cable with a joystick port.

The GAMEjammer is a Type II PC Card that works with DOS, Windows 3.x, and Windows 95. It supports most audio file extensions, and it's compatible with the popular SoundBlaster standard under both versions of Windows. It also comes with an

auto-install program, *MIDI Audio Works* software, and a troubleshooting diskette that includes a diagnostic program and list of frequently asked questions.

With the GAMEjammer, you don't have to play your games using the awkward and unnatural keyboard controls. Once again, you can play your games the way nature intended—with a \$100 joystick plugged into your system. Now get out there and get those rebel scum. 

Price: \$179
New Media
 (800) 227-3748
 (714) 453-0100
<http://www.newmediacorp.com>

Nikon Scantouch 110 Scanner



Once we got the Nikon Scantouch 110 scanner running, it offered scanning capabilities that were second to none. The 8.5- x 11.7-inch scanning area is large enough to accommodate one-step scanning of letter-size documents. And this scanner is fast; it only takes 24 seconds to scan a four-color full-page image at a resolution of 300 dots per inch (dpi). Users can install an optional transparency adapter and


an auto document feeder for even more scanning capabilities.

The scanner comes with Nikon's proprietary software, *Nikon Scan*. For the home-user, Nikon Scan provides an easy way to scan color images. Lay the photograph on the scanning area, click the scan button, and the image appears on your screen. Users who want more power and additional scanning features will enjoy using *Adobe Photoshop LE*, a digital-image editing and prepress production software tool included with the Scantouch 110.

And for those who want to scan text, the scanner also includes *OmniPage Limited Edition*, an optical character recognition (OCR) software package.

The Scantouch 110 definitely delivers high-quality scanning capabilities to your PC. Unfortunately, it must be acknowledged that Nikon fails to follow through on its side of the bargain, namely, making the product user-friendly. The most irritating feature of the scanner is the poor quality of documentation included with the product. The user's manual offers no step-by-step guidance for installing the SCSI (Small Computer System Interface) adapter card included with the scanner, and

little is said about attaching the scanner to this SCSI card. Similarly, the documentation included with Adobe Photoshop tells you how to install it, but it gives no explanation about how to use the program's many features.

For about \$500, the Scantouch 110 offers a lot of scanning power for a reasonable price. But users should prepare for an arduous installation process. 

Price: \$499
Nikon Inc.
 (800) 526-4566
 (516) 547-4355
<http://www.nikonusa.com>

ForeFront's WebWhacker




It's a jungle out there on the World Wide Web. You have to fend off the ravenous online services and Internet service providers (ISPs) who feast on your credit card as you struggle through a dense growth of Web pages. But like a machete slicing a path through the tangled forest, ForeFront's *WebWhacker* clears the way for cheap and easy Web browsing.

Essentially, *WebWhacker* downloads individual Web pages or entire Web sites—including the home page and all the direct and indirect links to it—into a permanent file on your hard drive. You then can review the contents of the Web site at your leisure without paying connection charges to the Internet. In our test, it took *WebWhacker* about an hour to download a newspaper's 127-page site on a 28.8 kilobits per second modem.

To ensure that the information obtained from these pages is current, *WebWhacker* periodically

revisits the online pages and downloads any changes it finds.

This way, you always enjoy the latest version of a site without the annoying inconveniences of connecting and waiting for pages to load.

The *WebWhacker* offers other conveniences, as well. You don't have to wade through links to reach a deeply buried page; you can employ a keyword search or browse the hierarchical listing of whacked Web pages to go directly to the page that interests you. The Web manager included with the *WebWhacker* also lets you organize the whacked Web pages into pre-set categories or categories you create. 

Price: \$49.95
ForeFront
 (800) 653-4933
 (713) 961-1101
<http://www.ffg.com>


VirusScan

Every computer owner should use some kind of antivirus software to fend off nasty programs designed to hurt productivity or destroy data. Among virus protection packages, McAfee's *VirusScan* has repeatedly had the highest virus detection rates, detecting more than 8,000 known viruses.

The single package includes versions for Windows 3.x, Windows 95, Windows NT, DOS, and OS/2. We ran the Windows 3.1 version.

VirusScan has two main components: *VirusScan* and *VShield*. *VShield* operates in the background, as either a terminate-and-stay-resident program (TSR) or as a virtual device driver (VxD). It acts as a real-time virus filter, checking for viruses during important activities such as disk insertion, system startup and shutdown, and program execution. The *VShield* Configuration Manager lets you determine exactly how you want *VShield* to work. You determine what you want searched and what actions should cause a search; you can

establish files, folders, or drives to be excluded from virus detection by *VShield*. You also choose whether you want *VShield* to automatically move, clean, or delete infected files, or just prompt you to choose an action when it finds an infected file.

VirusScan lets you program scheduled scans of memory or perform scans on command at any time. Again, you can determine what areas to scan and what actions the program should take when it finds an infected file. *VirusScan* also keeps an Activity Log, which lets you view previous scans and their results. 

Price: \$49
 (408) 988-3832
<http://www.mcafee.com/prod/av/vs95.html>





DeskJet 693C

Hewlett-Packard has put together another crack inkjet printer package just in time for the Christmas shopping season.

The new DeskJet 693C offers the average home and home/office user very good print quality at a decent mid-level price. But that's probably not its main selling point. For many users, especially those with young children, the point is the software package that accompanies the printer.

Let's just say HP has really set the dogs loose with this one. All

101 of them. Yes, it's Disney's 101 Dalmatians, and their print studio CD-ROM, which is included with the 693C. The product helps you make banners, greeting cards, calendars, and other cute (and sometimes useful) paper products. If the kids tire of printing goodies with the trademarked dotted dogs on them, they can pop in the included *PrintPak* software, which lets them print such items as magnets and picture frames.


When the novelty of all this fun stuff wears off, the grown-ups are left with a quality printer that should handle the print jobs of even the most demanding home user. It's no



color laser printer, but for an inkjet, it does a fine job.

As we used the new 693C, we quickly found the printer easy to set up and operate. We had it up and running, with inkjets aligned and specialty software loaded, in just over 20 minutes. We printed some doggy banners and ran the printer through a few tests using the ColorSmart setting—which automatically adjusts the settings to achieve the best colors—as well as the manual setting. We

ran jobs through on "Best," "Normal," and "EconoFast" print speeds and were quite pleased with all the results.

The 693C offers users plenty of printer, tons of software, and a reasonable price. And those dogs sure are cute. 

Price: \$349
Hewlett-Packard
 (800) 752-0900
 (208) 323-2551
<http://www.hp.com>

Learning Advantage Library




Broderbund has a reputation for excellence in educational software, and it collected its best products in the *Learning Advantage Library* series. The Library consists of two packages, one for kids aged 3 to 7 and one for kids 8 to 12. Each package includes four programs designed to cover the scholastic basics.

The set for younger children includes *The Playroom*, which introduces kids to elementary reading, math, time telling, and keyboarding. *James Discovers Math* takes a more in-depth look at math and problem solving. *Kid Pix Studio* is an art room gone mad on one CD-ROM. This product has all the tools kids could need to find an outlet for their creative sides, from the electronic version of the canvas and paintbrush to animation and

sound capabilities. The package is topped off with *Carmen Sandiego Jr. Detective*, the junior version of Broderbund's popular Carmen Sandiego Geography game.

The 8 to 12 version includes popular packages to make basic subjects fun. *The Reading Galaxy* helps kids practice reading comprehension skills. *The Amazing Writing Machine* helps with vocabulary and spelling and also teaches the different forms of writing, such as stories and poetry.

The last two programs in the package, *Logical Journey of the Zoombinis* and *Where In the USA Is Carmen Sandiego?*, are fun enough to sharpen skills without the dreaded "it's good for you" overtones. Both programs sharpen problem-solving skills. The Zoombinis focuses on recognizing patterns and logical reasoning. Carmen Sandiego teaches U.S. geography and research skills. 

Price: \$75 (each)
Broderbund
 (800) 521-6263
 (415) 382-4400
<http://www.broderbund.com>

Netscape Navigator 3.0


Netscape owns an overwhelming majority of the World Wide Web browser market—International Data Corp. reports that 87.6% of all Web surfers use a Netscape browser—and *Netscape Navigator 3.0* promises to keep Netscape at the top. This most recent edition of the world's most popular Web browser includes all the goodies of earlier versions, plus a few new options to make Web browsing more enjoyable.

Like its predecessors, Netscape Navigator 3.0 is first and foremost a Web browser. You type in a uniform resource locator (URL), and the browser will retrieve the Web site and display it on your computer screen. The large, clearly labeled command buttons that grace the attractive interface make it very simple for anyone to tour the World Wide Web. With a few clicks of the mouse, you can set up bookmarks, view newsgroups,



download shareware applications, print Web pages, and do all the other things previous versions let you do.

Netscape Navigator 3.0 also packs a few new pleasant surprises. The VRML (Virtual Reality Modeling Language) interpreter offers built-in audio and video capabilities. The just-in-time compiler helps Java applications run more efficiently. The expanded E-mail capabilities let you include sounds, graphics, and Web pages in your E-mail messages.

Netscape, which is available for 16 different platforms, can be purchased at retail outlets or downloaded at the Netscape Web page. 

Price: \$49
Netscape Communications Corp.
 (800) 320-2099
 (415) 937-3777
<http://www.netscape.com>



Oil Change

Because the Internet's bumps often make it look more like an off-road race than an Information Superhighway, you need to make sure that the "vehicle" you're driving is in top shape.


CyberMedia Inc. has developed an online *Oil Change* to help you maximize the performance of your computer. *Oil Change* will scan your PC, determine which applications are in need of an update, download the updates for you, and automatically install them if it's able. (An update is a software release from a manufacturer designed to fix bugs, or small program flaws, and improve performance.)

Oil Change also tells you what each update will do for your system, helping you decide whether you need it. It keeps

track of what updates you have installed and gives you the option of removing them later (if they were automatically installed by *Oil Change*).

Besides keeping track of updated drivers and patches for more than 600 programs, *Oil Change* automatically updates itself every time you run it. Note that after one year, CyberMedia charges an annual fee of \$29.95 for renewal of service.

We tested a beta version of the software and had some difficulty connecting to CyberMedia's server, but they assured us this was because of the changes they were making to the server because of the beta version.

This program, which is more of a complete tune-up than just an oil change, will help fix the knocks in your PC and get you merged back onto that highway—er, dirt road. 

Price: \$39.95
CyberMedia Inc.
 (800) 721-7824
 (310) 581-4700
<http://www.cybermedia.com>

Hayes Accura 33.6

Rapid Web surfing. Instantaneous downloads. TV-quality videoconferencing. These are the carrots hanging in front of Internet users—keeping them plodding along at 14.4 or 28.8 kilobits per second (Kbps), if they're lucky.

In the quest for ever-expanding bandwidth (or network capacity), modem manufacturers have managed to make better use of the limited capabilities of today's already straining phone lines. We looked at the Hayes Accura 33.6 modem to see what it could do for our own Internet capabilities.

The Accura was a cinch to install with Hayes' plug-and-play

technology, and the software bundled with the modem is some of the best around. Included are Quarterdeck's *Internet Suite 2*, a complete Web surfing kit, and *Web Talk*, Quarterdeck's telephony software, as well as Smartcom's call managing *Message Center*.

This self-titled Total Internet Solution is actually a 28.8Kbps

NetMailer


If you're tired of sending and receiving impersonal E-mail messages, take a look at Alpha Software's new E-mail merging program, *NetMailer*.

Normal mail merge, sending hundreds or even thousands of personalized copies of a single letter, costs around a buck a person. Using E-mail to reach a large client base is an inexpensive alternative. *NetMailer* makes it even easier and more personable.

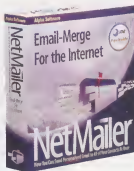
This E-mail merger can import lists of contacts from databases, contact managers, other E-mail programs, and even text files. It lets you keep an unlimited number of databases with up to 20 different mailing lists for each database. *NetMailer* also lets you create templates with customizable data fields for each list.

We tried this out by designing our own template. We could double-click the data fields for title, names, address, phone number, and any number of additional text fields. In the mail, these fields would be replaced by


the appropriate entry from the list. For example, if we were sending a message to two sets of magazine subscribers, we could make text field 1 on list one "PC Novice" and the same text field on list two "PC Today."

Richard Rabins, co-chairman of Alpha Software, says, "It's one of those products that doesn't do 55 million things, but what it does is incredibly useful." We agree. 

Price: \$99
Alpha Software
 (800) 666-9339
 (617) 229-2924
<http://www.alphasoftware.com>



quality of the phone line as well as the speed of the modem.

If you're currently getting lower than 28.8Kbps connects, a 33.6Kbps modem might not help you much. But if you're maxing out your 28.8Kbps modem's potential, you should probably look into upgrading. Most upgrades are less than \$30 (or even free). Current 28.8Kbps owners should check their modem manufacturers' Web sites for information on what kind of upgrade they would need. 

Price: \$160
Hayes Microcomputer Products Inc.
 (800) 374-8388
 (770) 840-9200
<http://www.hayes.com>



Microsoft FrontPage

Create the headlines for your own World Wide Web page with *Microsoft FrontPage*, an intuitive Web page design and editing software application. With this product, you'll soon be constructing professional-looking Web sites that will impress clients, amaze friends, and give anyone with a Web browser a chance to see what you have to say.

FrontPage is so easy to use because it requires no knowledge of Hypertext Markup Language (HTML), the programming language used to construct Web pages. FrontPage,


which requires Windows 95 or Windows NT, reduces the most frequently used page-building conventions to icons on a task bar. Want to change the color of your text? Click an icon. Want to add a scroll-down menu? Click an icon. Want to add a hyperlink? Click an icon. With a click of the mouse, you can manipulate text and graphics almost anyway you want.

The program's two main components, the FrontPage Explorer and the FrontPage Editor, guide you through the process of creating a Web page. The FrontPage Explorer lets you create and map



the pages of your Web site on a PC. The Explorer offers templates for devising personal, corporate, customer support, discussion, and project Web sites. And it's password-protected, so only authorized users can change the design of your Web pages.

The FrontPage Editor lets you build individual pages for your Web site. It provides templates for creating tables, drop-down

menus, glossaries, directories, and scrolling-text boxes. You can import wallpaper, graphics, and text. You can add links to other pages that you create or to other Internet sites. You even can create response forms and surveys. And to make sure your page has no mistakes, FrontPage includes a spell checker for correcting misspelled words. 

Price: \$149 (\$40 rebate available for registered Microsoft Office users)

Microsoft Corp.
(800) 426-9400
(206) 882-8080
<http://www.microsoft.com/frontpage>

Microsoft Greetings Workshop




When you care enough to send the very best, send something you've created. Microsoft and Hallmark Cards make it easy to create your own cards this Christmas season—or any time of year—with the *Microsoft Greetings Workshop*. Whether you're commemorating a 51st birthday party, a bar mitzvah, or a lasting friendship, express your sentiments with a card you made.

Microsoft Greetings Workshop, which requires Windows 95, features an extensive database of more than 4,000 graphics and 100 fonts. Add a personal touch to one of the dozens of templates included in the collection or design a card entirely from scratch, mixing and matching photographs, illustrations, and page borders with a personal message. If you use all the graphics options available to you,

the program lets you import your own graphics or download designs from the Hallmark World Wide Web site.

The Greetings Workshop also in-

cludes an Ideas folder, which not only offers professional hints for creating poignant cards but also provides advice on how to use the Greetings Workshop to make those special occasions just a little more special. And because some occasions call for more than a greeting card, the program lets you create certificates, fliers, invitations, announcements, banners, and calendars. Finally, the program has a reminder to help you remember upcoming events. 

Price: \$29.95
Microsoft Corp.
(800) 426-9400
(206) 882-8080
<http://greetingsworkshop.msn.com>




Starfish Internet Utilities

Many companies in the computer industry have attempted to organize the information contained on the Internet. Few have tried to provide users with a way of organizing and using that information once it reaches their desktops. Starfish Software Inc. is one of the few.

Starfish Internet Utilities offers itself as the hub of Internet activity on your PC. The program's control center, which automatically slides off your computer screen when you aren't using it, provides quick access to Starfish's cornerstone utilities. QuickMarks, a series of

color-coded file tabs, offers one-click access to your favorite online sites; QuickZip, a compression utility, allows hassle-free downloads and uploads; NetMeter displays your current connect time and lets you review your total connect time for the past day, month, and year; and NetClock keeps you on time by logging in and setting your system clock to a time server on the Web.

Starfish Internet Utilities, which requires Windows 95 or Windows NT, also includes extras that help manage your system. A resource meter tracks memory and storage allocation and tells you when system resources get too low. A Virtual Screens plug-in lets you shuffle wallpapers on your desktop, and the WinTools plug-in offers one-click access to system tools. 

Price: \$69.95
Starfish Software Inc.
(888) 782-7347
(408) 461-5857
<http://www.starfishsoftware.com>



Iomega Zip Drive

Ever wished you could squeeze a little more information on a 1.44 megabyte (MB) diskette? If so, you'll probably be fascinated by the idea of cramming 100MB of information onto an Iomega Zip disk and Zip drive, as well as the thought of ridding your hard drive of all the large files and little-used programs that dog up storage.

Because the Zip drive uses removable disks, the amount of data you can store is limitless. When you fill up one disk, just plug in another. Storing files is extremely easy; drag and drop files to and from the disks in Windows 95 or the Windows 3.x File Manager, just like you do to a diskette or hard drive.

The Zip disks' 100MB capacity makes them ideal for archiving large files, such as photos, video clips, sound clips, or large databases. They're better for backing up a hard drive than average diskettes, basically because you need a lot fewer disks. We also found that you actually can run some programs straight off the Zip disks, but this is practical only with programs that don't require much speed or are rarely used. Although the Zip drive can transfer 1.4MB of data per second to the computer, it's still slow compared to most hard drives now available.

Zip drives are available in an eye-catching purple and weigh in

at about 1 pound. They can attach to your desktop or portable PC either as an internal unit or as an external unit connected through a parallel port or a Small Computer System Interface (SCSI) port (if you have an internal SCSI card). The individual 100MB disks are available from numerous vendors for \$15 to \$20 each.

Price: \$199
Iomega Corp.
 (800) MY-STUFF
 (801) 778-1000
<http://www.iomega.com>

Where In The World Is Carmen Sandiego?



Carmen Sandiego and her gang of V.I.L.E. henchmen are stealing the world's treasures, from the ceiling of the Sistine Chapel to the steps to the tango. Young players take the role of a gumshoe rookie as they help the ACME detective agency make the world safe again. Users question witnesses and look for clues

Microsoft Encarta '97 Encyclopedia

Jam-packed with multimedia, interactive charts and activities, as well as online updates, the Encarta is the premier reference tool for any CD-ROM library.

The '97 Encarta is sold in both regular and deluxe editions, with the latter including added multimedia that requires two CD-ROMs and free online updates. In the deluxe edition, for example, users see places such as the Grand Canyon or the Cathedral of Notre Dame in 360-degree views spectacular enough to make you dizzy. The deluxe edition also features numerous collages, which combine articles, photos, videos, and sounds on topics such as mythology or the coral reef. However, don't bother with the deluxe edition if you have Windows 3.1; these two deluxe features will work only with Windows 95.



Encarta has all the encyclopedia tools you need, including a handy Pinpointer search feature, detailed timeline, "zoomable" atlas, and animated Interactivities. We found maneuvering the

Encarta simple thanks to drop-down button bars and a built-in overview. Some additional features we found notable include a MindMaze learning game, article tours for when you just want to browse, pictures and text that expand for a better view, a More Information feature for viewing related articles or World Wide Web links, and interactive charts that change with your specifications.

Price: \$54.95 (regular edition), \$79.95 (deluxe)
Microsoft Corp.
 (800) 426-9400
 (206) 882-8080
<http://www.microsoft.com>

to determine which henchman or henchwoman did the deed and where the crook is headed next. The idea is to catch up with the villain before the power on the ACME Babel-Link Translator runs out.

We loved Broderbund's new version of *Where In The World Is Carmen Sandiego?*. There's much more animation than the previous version contained, a new Chief (Lynne Thigpen from the PBS television version), and even tour guides. Although the game is designed for players as young as 9, it's not as easy as you may think. For example, would you have known where you can stand on the Jebel Musa and look "straight"

at Gibraltar? How about the name of the country with 1 million lakes? Luckily, the game comes with a built-in, searchable mini-encyclopedia/atlas.

You'll need a 256-color monitor and eight megabytes of RAM to run this program. And even though the program suggests at least a 486 PC operating at 66MHz, we recommend a faster computer. Our 486 couldn't always keep up.

Price: \$40
Broderbund Software Inc.
 (800) 521-6263
 (415) 382-4400
<http://www.broderbund.com/carmen>

AverMedia FunTV Capture Board

The AVerMedia FunTV card brings the stars of the small screen to your computer monitor. Simply insert this TV capture board into one of the empty 16-bit expansion slots on your computer's motherboard, connect a few wires, plug in the antenna cable, and soon you'll be using your mouse to flip through your favorite television programs.

This card makes your monitor work like any other television set. Tune in to a channel in your viewing area, and the program currently airing on that station

appears on your computer screen. The on-screen remote control lets you preset the channel selection, mute the sound, adjust the color settings and volume, and see an on-screen display of the settings. You also can connect your VCR to the FunTV card for viewing video cassettes.

Because this television runs on a computer, however, it offers a number of options not available on the standard idiot box. The FunTV card contains most of the



video-editing tools offered by similarly priced video-editing kits so you can capture and save on-screen images, adjust the zoom controls, manipulate the appearance of the image, and cut, paste, and crop the images. And the Always On Top command lets you watch television while you use your word processor, personal finance manager, online browser, or any other computer application.

The AVerMedia FunTV card is compatible with most computers, requiring a lowly 386 processor, basic multimedia components, and four megabytes (MB) of random-access memory (RAM). The high resolution of computer monitors makes them extremely suitable for video viewing, and at a reasonable price of \$249, the FunTV card is cheaper than buying another television set. AVerMedia also sells a \$99 TV tuner board that works just as well as the TV capture board, but it doesn't have any of the editing tools.

Price: \$249

AverMedia
(510) 770-9899

<http://www.aver.com/aver>

Cinemania 97

The local video store carries hundreds, and sometimes thousands, of movies encased in little plastic boxes. Once you've seen the greatest of the latest, how do you choose among the rest?

Microsoft's *Cinemania 97* provides a comprehensive guide to the movies, including both those made for television and those shown on the big screen. To help you find a flick to suit your mood, Microsoft breaks down the movie listings into categories to simplify the search. If you still have trouble finding something that sounds appealing, the *Cinemania* crew will suggest a few of their favorites from each category.

Plot synopses are accompanied by biographies, articles, critiques by Roger Ebert and Leonard Maltin, portraits, and video clips. The package comes together to provide an entertaining who's who and what's what for movie buffs.

You can take a break from poring through the lists by letting *Cinemania* take you on a tour. Celebrities such as Mario and Melvin Peebles, Roger Ebert, and Sandra Bernhard take you on Hollywood tours through *The World Of Alfred Hitchcock*, *Great Ladies Of The Movies*, *Romantic Comedies*, and five others.

When you've exhausted the information on the CD-ROM, you can click the easy-to-use Internet Connection icon to jump online and update your reserve with the latest *Cinemania* information. Between its included information and the online updates, *Cinemania 97* should give you all the information you need to prepare for that trip to the video store.



Price: \$34.95

Microsoft Corp.
(800) 426-9400
(206) 882-8080

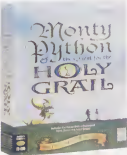
<http://www.microsoft.com/catalog/entertainment.htm>

Monty Python & The Quest For The Holy Grail

If you can dodge the insults of the obnoxious Frenchmen, decipher the insane babblings of the old man from scene 23, and defeat the killer rabbit armed only with the holy hand grenade, you may be worthy of this product.

Monty Python's troupe of wacky Brits and 7th Level first joined forces to create *A Complete Waste of Time* and have reunited to develop a game that is at least equally beneficial to mankind. In *Grail*, players must collect clues and items that will help them cross the Bridge of Death and find the Holy Grail.

The game features scenes from the movie (as well as a new scene involving King Brian the Wild), new audio recordings from Python members, and diverting games that push the sanctity envelope. Drop Dead, a Tetris-like stacking game involving deceased (and semideceased) plague victims, is indicative of the humor and taste level of this quest.



The game itself is easy to play and difficult to lose; it can be completed in just a few hours. But there are many entertaining extras hidden in the scenes. Careful examination will be rewarded with at least a chuckle.

A Pythonesque feel exudes from the game, from the registration screen to the "try again" message if you manage to lose. If you loved the movie, you'll love the game. If you couldn't stand the film, well, this may not be the quest for you.

Price: \$49.95

7th Level Inc.
(800) 884-8863
(818) 547-1955

<http://www.7thlevel.com>



FlightStick Pro

special features and ergonomic shapes. Our favorite was CH Products' FlightStick Pro. Although this joystick has been on the market for awhile, we still think it's one of the best around. It has a simple asymmetrical design that provides a comfortable grip for either righties or lefties with equal accessibility to the buttons either way.

A keyboard works pretty well for Microsoft Word and for games such as *Wheel of Fortune* or *Scrabble*, but for a run-and-gun action game, you need more easily accessed control. For arcade-like play, you need a joystick.


There are many joysticks on the market with a variety of

Unlike some of the cheaper joysticks, the FlightStick Pro has a full range of motion. You can easily turn any angle without any jerky stops. The movement is loose but controlled.

One of the best features of the CH joystick line is the calibration procedure. Some users may consider this a bittersweet feature because setting the controls takes a little work. The calibration process is made easier by a pair of dials that let you manually fine-tune the instrument. The initial calibration takes a little time, but once it's completed, the control is tight with smooth corners and sensitive steering.

Another plus for the FlightStick Pro is the throttle dial at its base. This provides easy touch control that can be worked easily by your left hand while you dodge and kill with your right. The dial isn't quite as easy as an

accelerator foot pedal, but it is comparable to the standalone throttle accessory.

The trigger, a point-of-view cap, and three additional programmable buttons complete the package. The point-of-view cap lets you quickly change the screen you see by rotating in a circular motion. With all of these controls, your couch, and the proximity of the refrigerator, you can probably have a better time than at the arcade. 

Price: \$99.95
CH Products
 (800) 624-5804
 (619) 598-2518
<http://www.chproducts.com>

PointCast Network



In the beginning, there was information. Then came the vast communications network known as the Internet, which allowed for the worldwide transmission of information.


Now comes the *PointCast Network*, which brings directly to your computer only the information you choose to receive. This information retrieval service, which draws its content from contracted news sources such as Reuters NewsMedia, United Media, CNNfn, Knight-Ridder, and the *Los Angeles Times*, offers nine information categories that can be customized to fit your individual needs, including:

News—Choose from the latest national, international, political, and business headlines; **Companies**—Track the growth

of your stocks and mutual funds; **Weather**—Review local and world weather summaries and forecasts; **Sports**—Follow your favorite teams; **Pathfinder**—Retrieve articles from *Time*, *Money*, or *People* magazines; and, **Newspapers**—The *Boston Globe* and *Los Angeles Times* at your fingertips.

The PointCast retail package also includes direct links to the Internet so you can search the World Wide Web.

You can access PointCast at any time by clicking its icon. Or, wait a few minutes, and it will automatically activate itself. Like an intelligent screen saver, the updated information marches up and down, back and forth across your computer screen.

To run PointCast, you need a modem, Windows 95, and \$20 for the software. You also can obtain a scaled-down version for free from PointCast's online site. 


Price: \$19.99
PointCast Inc.
 (408) 253-0894
<http://www.pointcast.com>

Rand McNally TripMaker

1997 Edition

Last year's version of this software impressed us; the new version adds even more to an already popular package. Features new to the 1997 version include a connection to Rand McNally's World Wide Web site for information on road construction, weather, and links to other travel-related sites; extended camping information; 20,000 road updates; a multimedia National Park section; and the Personal Profile Guide, which ensures that *TripMaker* tailors its travel recommendations to your preferences.

The CD-ROM includes both Windows 3.1 and Windows 95 versions of the software. Win95 users will benefit most from the new version, though. Several features, such as the Internet link, the National Parks Attraction Pack and interactive maps, and the Personal Profile Guide, are designed just for Win95 users. Windows 3.1 users, however, still have routing, hotel, and restaurant information that is impressive even without the Win95 features.

In addition to a detailed mapping program that helps you get from point A to point B (by way of several other points, if you desire), *TripMaker* 1997 includes information on hotels, restaurants, local attractions, airports, sports facilities, and tours, as well as a budget to help you estimate your trip's cost. There are also lists of toll road information, toll-free numbers for airlines and car rental, and a travel checklist to keep you organized. 

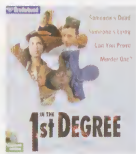
Price: \$39.95
Rand McNally New Media
 (800) 671-5006
<http://www.randmcnally.com/catalog/tripmkr.htm>



In The 1st Degree


Whodunit? Everyone knows it was Mr. Tobin in the gallery with the revolver. Unlike in most typical gumshoe mysteries, the culprit in this murder/mystery game has already been caught and confessed to shooting his business partner. Your job, as the prosecuting attorney, is to prove to a jury that the crime was premeditated. The defendant had two possible reasons to commit the crime: an insurance fraud cover-up and/or jealousy. You have to do the research, interview witnesses, and present the best case possible when you're finally ready to take the reins in the courtroom.

The way you conduct your investigation, the materials you review, and the way you interrogate your witnesses all determine how the trial plays out. You must learn not only the facts and details but when to coax and when to play the tough guy. The relationships you establish with the witnesses during your interrogation affect



their responses on the stand during the trial.

You monitor your progress at the trial through nightly news reports. Although they have no direct effect on the outcome of the case, watching these reports and evaluations by the "experts" gives you some idea of how you're doing and might prompt you to change your technique.

The investigative intrigue is enhanced by the realistic graphics and video work, giving you the feeling that you're in a movie in which you control all of the actions and responses. 

Price: \$45
Broderbund Software Inc.
 (800) 521-6263
 (415) 382-4400
<http://www.broderbund.com>

Little Golden Books Interactive Stories

For 50 years, Little Golden Books have been as much a part of growing up as mud pies and tree houses. From "The Poky Little Puppy" to "The Little Engine That Could," these books have entertained children while gently teaching them about punctuality, perseverance, and the many other lessons kids must learn.

Now, children of the multimedia age can enjoy high-tech versions of these timeless tales.



The Little Golden Book Interactive Stories series presents six classic stories that will delight youngsters of today just as much as they delighted the little folks of past generations. The difference is that these stories on CD-ROM come loaded with many options the paper versions didn't have.

Children can listen to the stories in Spanish or English, and as the speaker reads each phrase,

PaperPort Vx

With true plug and play, the PaperPort Vx, a sheetfed scanner from Visioneer, demonstrated its ease of operation as soon as we took it out of the box. We connected it to our computer, installed the software, and were ready to go—and that was the tough part.

Anytime we wanted to scan something, we just inserted the document into the PaperPort. The scanner would turn on, grab hold of the document, scan it, and then launch the software and bring up the scanned image on the desktop.


Once the image was on the desktop, we could do whatever we wanted with it. If we wanted it printed, we dragged it to the Printer icon. If we wanted it converted into a graphics format, we dragged it to the Paint icon. And if we wanted to take advantage of the PaperPort's reliable optical character recognition (OCR) software, we dragged it to the *Microsoft Word* icon. To test this, we scanned in a document with varying text sizes and fonts and converted it to Word. The new text document was almost an exact replica of the original. The OCR's only problems were with



recognizing the exact font, reproducing the same margins, and deciphering tiny text.

The PaperPort also comes with CardScan software that lets users scan in their business cards and keep them in a digital Rolodex. The CardScan uses the same OCR software and can help anyone organize and keep track of their contacts.


The only problem we have with PaperPort is its lack of color capabilities. (It does, however, give splendid renderings in 256 shades of gray.)

The tiny, but powerful, PaperPort epitomizes the usefulness of a sheetfed scanner. With quick scanning capabilities, excellent OCR software, and ease of use, this scanner makes a wonderful addition to any desktop. 

Price: \$299.95
Visioneer Corp.
 (800) 787-7007
 (415) 812-6400
<http://www.visioneer.com>

the words appear highlighted on the screen. Animated illustrations and realistic sound effects complement each story's plot. Children can watch videos or sing along to the songs that accompany the stories. Each story also includes a collection of fun activities and games, including mix-and-match, connect the dots, mazes, obstacle courses, and coloring activities.

Powerhouse Entertainment has the following Little Golden Book

titles currently available on CD-ROM: *The Sailor Dog*, *The House That Had Enough*, *Mr. Right's Animal Farm*, *The Adventures Of Goat*, *The Magic Paintbox*, and *The Little Red Caboose*. 

Price: \$29.95
Powerhouse Entertainment
 (800) 258-2088
 (214) 233-5400

Lifetime Touchpad Wireless Keyboard



You just push the cursor around the screen by dragging your finger over the touchpad. Clicking and double-clicking with this keyboard are easy, too; simply tap your finger once or twice on the touch-

At first glance, the Key Tronic Wireless keyboard is a lot like any other keyboard. It's beige. It has 104 keys, including the three keys added to most new keyboards after the release of Windows 95. And it sits on your desk.

Well, some of the time anyway. This keyboard uses infrared technology rather than wires to communicate with the computer. It can sit on your desk, but you might prefer to put it on the kitchen table, at the far end of the conference room, on your bed, or anywhere within 50 feet of your computer.

This maneuverability wouldn't be of much practical use, though, if you had to rely on a tethered mouse to maneuver the pointer around the screen. So Key Tronic put a touchpad on the keyboard. Although it takes some getting used to, the concept behind the touchpad is simple to understand.

Picture It!

With a little help from a scanner, a digital camera, or a self-addressed, stamped envelope shipped off to Kodak, you can use your own creativity to make your pictures the best they can be. *Picture It!* takes your favorite photos and helps you make professional-looking improvements with a few mouse-clicks.

pad. You even can drag and drop with a quick tap and slide of your finger. For traditionalists, Key Tronic includes small buttons to the right and left of the touchpad that work just like the buttons on a mouse.

Key Tronic also made one minor change to the standard keyboard layout. They enlarged the ENTER key and, in doing so, moved the Backslash key from its position above the ENTER key to a new position directly below it.

As with other Key Tronic products, this keyboard is guaranteed for life and is able to withstand 20Gs of force and more than 20 million strokes per key.

Price: \$199
Key Tronic
 (800) 262-6006
 (509) 927-5226
<http://www.keytronic.com>

The fun begins after you input your photographs through a scanner, digital camera, or CD-ROM. (Kodak supplements the software package by putting one roll of your pictures on CD-ROM.) *Picture It!* will let you change your photo in several ways, from altering the colors to washing out a picture to getting rid of that demonic-looking red eye.

The focus adjustment is one of the neatest features of *Picture It!*.

Hanes T-ShirtMaker & More!



Making a T-shirt, or any other object, is a simple process; you create the design you want to transfer, either from scratch or using included designs. If you want to do it yourself but need a little help, there are clip-art graphics, or you can import graphics and photos from other sources.

As the title suggests, this package lets you create much more than just T-shirts, though that's impressive enough for many people. Just a few of the things you can decorate are bags, clocks, pennants, visors, and mouse pads.

You'll need an inkjet printer because a laser printer will melt the transfer material and ruin your printer. One sheet of transfer paper and a Hanes T-shirt are included with the program. You can order additional transfer paper and items to decorate from Austin-James and apparel from Hanes. Ordering information and descriptions of the items available are included in the manual.

If you're using a small design, such as for a visor or a small logo, you can print more than one design per page, making the best use of the transfer paper. Once you've printed the design, you just have to iron the transfer paper onto the material you're using and peel the paper away. Do be aware, though, that you should follow the precautions to prevent bleeding of bright colors on items that will be washed.

Price: \$39.95
Austin-James Inc.
 (800) HANES-2U
 (800/426-3728)
 (415) 328-4886
<http://www.hanes2u.com>



automatically adjusts the picture to make the close-up image just as clear as the full-size version.

Take the finished picture and put it on a calendar, a card, or a collage. You can put borders, mats, and backgrounds on your photos, but you'll need a color printer to take full advantage of *Picture It!*.

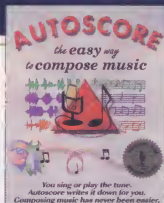
With most digital pictures, the pixels get larger as the image is enlarged, making the photo appear grainy or fuzzy. With *Picture It!*, you can zoom in on a piece of a picture, and the software

Price: \$79.95
Microsoft Corp.
 (800) 426-9400
 (206) 882-8080
<http://www.microsoft.com/pictureit>

Autoscore

Do-Re-Mi-Fa-So-La-Ti-Do. If you're brave enough to sing out loud into a microphone, you can see what this little ditty looks like on paper (or on your computer screen). *Autoscore* by Wildcat Canyon Software transcribes the notes you sing. If you're uncomfortable with your singing voice but have an instrument you like to play, *Autoscore* will record that, too.

In addition to recognizing the pitches of the notes you sing, the



software also records the rhythm you sing them in. Whole notes, quarter notes, and eighth rests all line up accordingly as the tune bounces along.

This product isn't quite up to the standards of someone with Mozart's expertise. It only can recognize one note at a time (not

chords), and it can't read your mind. If you want a C on paper, you have to sing a C, not a B or C#. However, *Autoscore's* ability to recognize notes and rhythm so accurately is pretty impressive.

The tune the computer transcribes doesn't have to be the final version. *Autoscore* does the original transcription, but you can go back and edit the score. You can add notes to complete chords, change the pitch of a note that doesn't sound quite right, or change the key signature of the entire piece.

Once the tune has been recorded, you can print out a hard

copy, or you can have *Autoscore* play the tune back on an instrument of your choice.

The *Autoscore* transcription method takes less time than sitting at a table with pen in hand, and you may be more likely to catch the tune that keeps running through your head. Maybe you'll even be the next great composer. 🎵

Price: \$150

Wildcat Canyon Software

(800) 336-0989

(510) 527-5155

http://www.wildcat.com

Power2Play



If you've made the move from DOS to Windows 3.1 or Windows 95 and have DOS programs you'd still like to use, this may be just the thing for you. *Power2Play* lets you run the most stubborn DOS program from Windows. (Though *Power2Play* is aimed at those who want to play games, it also lets you run other DOS programs from Windows 3.1 or Win95.)

There's a simple dialog box to help you add your DOS programs to the *Power2Play* main menu. Once you've added a program, all you have to do is highlight its name and click Run, or double-click the program's title.

If a DOS program won't run properly under *Power2Play*, the

PowerBoot feature can give it a kick in the pants to get it going. In Windows 3.1, *PowerBoot* creates a custom boot diskette; when you start your system from that diskette, you'll be able to run the DOS program.

Under Win95, *PowerBoot* creates a custom configuration file that lets *Power2Play* run the program.

Power2Play even gives you a toolbar to make it easier to start your DOS programs from a Windows operating system. The *PowerBar* stays on top of the Windows desktop or any other open application, letting you launch a DOS program with a single mouse-click. You choose which programs you want on the *PowerBar*. 🖱️

Price: \$34.95

The Software Labs

(800) 569-7900

(206) 869-6802

http://www.

softwarelabs.com/p2play

Mindscape Home Office Assistant

A computer and telephone do not a home office make. Successful telecommuters and home-based entrepreneurs need more than the latest equipment; they also must have the organizational skills of a secretary, the research skills of a librarian, the accounting skills of a bookkeeper, and the experience of someone who has done it before.

Although most people who work at home can't afford to hire personal assistants to handle these duties, they can get the next best thing for less than the cost of an answering machine. *Mindscape* has put onto one CD-ROM all the tools needed to organize and manage a successful home office.

Mindscape Home Office Assistant offers a searchable library of resource directories and business books, including a business-related thesaurus, dictionary, and almanac; a legal guide; and a tax guide. You'll find a collection of business documents and templates for every situation, from asset depreciation schedules and payment

plans to employee termination reports and newsletter templates.

The *Home Office Assistant* also contains numerous links to business-related online sites where you can purchase office supplies and find out about shipping and printing services, business organizations, and government resources. Finally, the CD-ROM contains trial versions of *QuickBooks Pro* and *PrintMaster Gold* so you can see how these popular home-office products fit into your business plan. 🖨️

Price: \$35

Mindscape

(800) 234-3088

(415) 897-9900

http://www.mindscape.com





Surfman

Logitech's Surfman handheld controller lets you put up your feet and control the wide world of the Internet with your fingertips. Aside from slight movements of the phalanges and an occasional blink of the eye, you'll exert virtually no physical effort as you control the cursor's movement.

The Surfman was designed for comfort; the trackball rolls smoothly under the thumb, and the three programmable buttons are positioned within easy reach of the trackball. Small children might have problems getting their fingers around the Surfman, but adolescents and adults will appreciate its molded design. And the Surfman is just as easy on the arm as it is on the fingers. Because this cordless Internet controller uses

radio waves instead of infrared technology, you don't have to point it at the computer to elicit cursor movement.

But physical comfort isn't the only attraction of this Internet controller. The Surfman features a CyberJump menu that brings together the functions most often used while browsing the Internet. This menu lets you jump to or add a bookmark, stop transmissions, view the previous Web page, open the Windows 95 Start menu, and access your browser's pop-up menus. It also offers one-touch scrolling capabilities that aren't available on most mice.

With Logitech's Surfman, browsing the Internet feels more like watching television than working on a computer. Has Logitech ever considered making a popcorn popper? 🍿

Price: \$99
Logitech
 (800) 231-7717
 (510) 795-8500
<http://www.logitech.com>

Smart Label Printer Pro

Printing labels doesn't have to involve the hassle of trying to configure a word processor to print properly. You can relieve label headaches with the easy-to-use Smart Label Printer Pro, which lets you print in the background, so you can use your computer for other tasks while it prints your labels.

Installing the printer is as simple as plugging in the power source and plugging a cable into a serial port on your computer. Even inserting a roll of labels is easy because the printer automatically feeds the labels into the correct point. The software

installation is equally painless; run Setup or Winsetup (the version for Windows) from the installation diskette. You'll just answer a few questions, such as which directory to install the program to and which COM port you're using, and you'll be on your way.

Once the printer is set up, creating a label is as simple as clicking the type of label you want, typing the text you want on the label, and clicking Print.

The printer handles four label sizes: standard mailing labels, Euro labels (which are 3/4-inch longer than standard labels), diskette labels, and shipping

You Don't Know Jack

Your host belittles you at every turn and asks questions that lurch between moronic and encyclopedic. Strange sounds and images assault your senses. And at any time, your friends might try to make life even more difficult for you.

Sounds like fun, doesn't it? We thought so, and we weren't disappointed with *You Don't Know Jack*, the CD-ROM-based trivia game that makes you a contestant on a make-believe television game show.

You can play alone, or up to two people can join you for a seven- or 21-question game. Each question begins when you choose from three categories that appear on your screen. Category choices include such brain teasers as Ponch And John In Outer Space and Bathroom Anagrams. Once

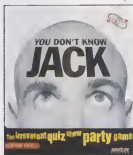
you pick your category, the host fires off a question, and the contestant who buzzes in first and answers correctly wins the money.

It sounds pretty straightforward, and it is until you run across one of Jack's quirks, such as the Gibberish Question and the speed-matching round that ends each game. Oh, and don't forget the option that lets you force your competitors to answer the tough ones.

This game won't appeal to everybody, but we sure liked it. And apparently it appeals to others as well, as Berkeley Systems recently released a Volume 2, a new question pack for the original, and a sports version.

Let the Jack Attack begin. 🎮

Price: \$29.99
Berkeley Systems Inc.
 (800) 344-5541
 (510) 540-5535
<http://www.berksys.com>



labels. Those four sizes make it possible for you to create all kinds of labels, from simple address labels to name tags, videocassette labels, and file folder labels.

You can add graphics to the labels, print labels created in other applications, save label formats you may want to use again, and even add postal bar codes to mailing labels.

While many people may not print enough labels to feel that they need a specialized printer, if you do a lot of professional mailing, the Smart Label Printer Pro will save you a lot of time. The printer's software includes a contact database with import and export capabilities to help you organize your mailing labels. 🖨️

Price: \$299.95
Seiko Instruments USA Inc.
 (800) 688-0817
 (408) 922-5900
<http://www.seikosmart.com/products.htm#slppro>



QuickCam

This holiday season, record your family memories in a new way—on your PC. The QuickCam video camera (available in color or black and white) by Connectix looks unsettlingly like the anatomical part it imitates. From its spherical shape and lens to the long cord that connects this little gadget to your computer, you get the feeling that your computer is watching. . . .

The palm-size camera connects directly to your system, using both the keyboard port and your parallel (printer) port. The keyboard connection is constructed so you can plug your

keyboard in as well as the camera.

QuickCam comes with two easy-to-use programs that play and record the pictures the computer's mechanical eye observes, whether they be moving images or still shots. If you opt for still shots, you can position the camera, set a timer, and jump in for the pose.

The accompanying software lets you fine-tune the image you see on-screen. The video is not quite up to the quality of the average handheld video recorder, but it's a quick and easy means of getting your face on your PC.

To illustrate how to use your new pictures and video clips, Connectix includes a sampler of

its software package *QuickCards*, which lets you import the pictures and video clips you record and attach them to a multimedia "card," complete with graphics and sound.

Even without the frills of the card, you can surprise friends and family that couldn't join you for the holidays by sending them pictures via the built-in America Online (AOL) icon. QuickCam also contains an add-on module that lets you send your pictures over the Internet with one-click ease. AOL helps QuickCam make sharing the holiday fun a little easier.

Price: \$199
Connectix Corp.
 (800) 950-5880
 (415) 571-5100
<http://www.connectix.com>



PORT In-Car Charger

Frantic businessperson scenario No. 34: You've already given two big product presentations today, and your third happens to be in less than an hour on the other side of town. During the brilliant closing comments of the last talk, you noticed your trusty portable computer's battery light was blinking. Luckily, last night you thought ahead and charged up the spare battery. Unfortunately, you left that spare sitting on the kitchen table this morning. So what do you do now?

If you're an exceptionally prepared person, you reach for the in-car charger stashed in the glove compartment of your car. You calmly plug one end of the charger into your computer and the other end into your car's cigarette lighter. And then, while you make the 40-minute drive to meet your next client, you recharge your notebook. You arrive at the meeting with enough



confidence (and power) to pull off another stunning performance.

For on-the-go portable users that need a little extra charge now and again, PORT offers in-car chargers that work with most major notebooks. The chargers are small, and they only weigh about 3 ounces, so they won't take up much room in your computer bag or glove compartment.

It's a small package and a reasonable price for a little peace of mind.

Price: \$59.95 to \$79.95
PORT Inc.
 (800) 242-3133
 (203) 852-1102
<http://www.portinc.com>

Quake

Quake is scary. It's scary that it works so smoothly; it's scary that it's so realistic; and it's scary . . . well, because it frightens you.

This product was created by id Software, a pioneer in the field of first-person killfest games (not necessarily a glowing addition to a résumé, but it makes you popular with the kids). With *Doom*, id let a player take on the role of a hero who attempts to stop a demonic invasion of the earth. The three-dimensional (3-D) realism of the game helped make it the highest-selling piece of software of all time.

Quake spends even less time than *Doom* with extraneous information, like a plot, but it surpasses *Doom* by leaps and bounds in terms of realism. The 360-degree field of view, the fluid motion, and the dark atmosphere (with eerie music and sound effects by Trent Reznor of Nine Inch Nails fame) thrust players into the game. The fun they

end up having makes it difficult to leave.

But the neatest thing about *Quake* is its built-in ability to be played over the Internet. Players with fast modems and Internet connections can test their skills in deathmatches against up to 16 Quakers from around the world. Still in its infantile stages, the potential of this virtual interaction is earthshaking in itself.

Quake's violence and intensity are not for the faint of heart, but its 3-D action and frightening realism rank it high on the Richter scale.

Price: \$45
id Software Inc.
 (800) 434-2637
 (214) 613-3589
<http://www.idsoftware.com>



PhotoPC

Relatives who turn into picture-taking fiends around the holidays have a new torture tool—the PhotoPC.

PhotoPC is a quick and easy way to circumvent the scanner and transfer new photographs directly to your computer. You simply take digital pictures with a special camera, which automatically stores the images in its own one megabyte of random-access memory (RAM). With this 1MB, you can store 32 standard-resolution images or 16 high-resolution



images. The high-resolution setting gives you better picture quality, but you need a monitor that can handle 640 x 480 resolution to view the pictures properly. The higher resolution simply means there are more pixels per square inch. The lower resolution contains fewer pixels and appears slightly grainy, though it's still pretty clear.

The digital camera looks and operates much like a regular 35mm camera with all of the conveniences that top-of-the-line products provide. All you have to do is point and shoot. The camera will focus and gauge the light for the flash.

If you get a little camera happy, you might want to upgrade your memory capacity. You can purchase an additional 2MB or 4MB of RAM for a total capacity of 96 standard- or 48 high-resolution images and 160 standard- or 80 high-resolution images, respectively.

PhotoPC requires four AA alkaline batteries, which come

included in the package. You also can order an AC adapter that will let you save battery power while you're transferring the pictures to the PC.

EasyPhoto, the software package Epson includes, lets you transfer your pictures from the camera to your PC via a serial port and store them either on diskette or on your hard drive. You also can make some minor adjustments to the picture by altering the color, brightness, and contrast.

Price: \$399
Epson
(800) 463-7766
(310) 782-0770
<http://www.epson.com>

Microsoft Publisher 97

If you're looking for a desktop publishing program that's sophisticated enough to produce professional output but cheaper than programs such as PageMaker, Microsoft Publisher may fit your needs.

Publisher is easy to use, with PageWizards for many common desktop publishing projects. The PageWizard asks a series of questions, using your answers to help design your project. All you need to do, unless you feel the urge to create something from scratch, is add your material to one of the templates.

In addition to familiar features from previous versions, Publisher 97 includes several significant additions. One of the most impressive is the Web Site Wizard, which makes creating a Web page as easy as creating a brochure or newsletter. The Clip Gallery has been expanded for this version, and the Clip Gallery Live, a clip art resource on Microsoft's Web site, has been added. The Clip Gallery Live is a



fresh supply of art, video, and audio clips for use on Web pages. There is also a Mail Merge feature, a Postcard PageWizard, an expanded Design Checker, a Font Preview menu, and the ability to create custom borders.

The only drawback to this version of Publisher is that it only runs under Windows 95 or Windows NT. Also, while the software is available on CD-ROM or diskette, the CD-ROM version includes more clip art, fonts, and borders than the diskette version.

Price: \$79.95
Microsoft Corp.
(800) 426-9400
(206) 842-8080
<http://www.microsoft.com/publisher>

Quicken Financial Planner

If you're worrying about how to be sure you can retire someday and not have to live with your kids, or how to make sure you can afford to give those kids a college education, help is on the way.

Quicken Financial Planner guides you through simple questions about your finances and helps you create a financial plan for your family, including such factors as retirement plans, social security benefits, college tuition, and life insurance.

You can choose between creating a QuickPlan in about 15 minutes or a Full Plan in about an hour. (If you choose QuickPlan, you can later switch to the Full Plan.) You enter information such as your current income, the amount you expect your income to increase by each year (due to inflation), your investments and savings, and your expenses. Include your spouse, if you're married. You also choose what age you want to retire at. The QuickPlan option takes this information and calculates the plan

as you designed it. It then will tell you whether you will or won't be able to support yourself in retirement based upon your plan and help you adjust the plan if necessary.

In addition to the planner, Quicken includes a mutual fund finder, which has information about 4,400 funds, and free Internet access to financial information on the Quicken Financial Network.

Price: \$39.95
Intuit Inc.
(800) 446-8848
(415) 944-6000
<http://www.intuit.com/qfp>



Be a computer programmer!

Train with a Pentium 100 Multimedia PC, featuring:

- 8 meg RAM ■ 1 gigabyte hard drive ■ Super VGA color monitor
- Quad-speed CD-ROM drive with sound card ■ 28,800 baud fax/modem ■ Visual Basic ■ Power C ■ Windows 95
- Netscape Navigator™ Web browser ■ And more!

If you think computer programming is hot today, just look at the forecast for tomorrow — and for many years to come! The Bureau of Labor Statistics estimates that by 2005, computer-related employment will jump by an estimated 60% nationwide for trained programmers — with as many as 400,000 NEW jobs opening up!

Now, with NRI training, you can get the in-demand skills you need to build a top-paying career — or business of your own — in this high-growth, high-opportunity field!

**Bonus
Internet
Training!**

**"Those with
up-to-the-minute skills
can almost
name their price."**

— *The Washington Post*,
June 4, 1996

It's true. With the lightning-quick growth of technological innovation comes a soaring demand for computer programmers and other specialists whose skills are critical to the success of high-tech companies. And, while the demand is high, the supply of specialists is low. That's where you come into the picture.

In as little as a year, you can become the highly skilled computer programmer today's companies seek — and see your NRI training literally pay off! In fact, according to *The Washington Post*, annual starting salaries range from \$32,000 all the way up to \$47,000 in some cities for those with expertise in today's hottest programming languages!

**Get hands-on training
with a Pentium 100 computer
and professional software**

NRI's step-by-step lessons and hands-on programming projects help you first master the design concepts used every day by successful PC programmers. Then, with the support of your experienced NRI instructor, you quickly move on to learn how to design, code, run,

debug, and document programs in three of today's hottest languages — BASIC, C, and Visual Basic. And, since Visual Basic is specifically designed for creating Windows applications, you learn to generate fully functioning Windows 95 programs!

Best of all, you train with a powerful Pentium 100 computer system with 8 meg RAM, 1 gigabyte hard drive, Super VGA color monitor, quad-speed CD-ROM drive, 16-bit sound card, 28,800 baud fax/modem, Windows 95, and more!

Learn to tap the power of the Internet

Now your course includes bonus training in PC Communications and the Internet. Using the Netscape Navigator™ Web browser we provide,

you can effortlessly move from one site to another as you explore the vast resources of the Internet and World Wide Web. And while you're online, check out NRI's Home Page, where you'll find exciting new services exclusively for NRI students.

Send today for your FREE catalog

If the coupon is missing, write to us at the NRI School of Programming, 4401 Connecticut Avenue, NW, Washington, DC 20008. Or...

**CALL 1-800-321-4634,
Ext. 2097**

You may even contact us through our World Wide Web Home Page at: <http://www.mhcc.com>

SEND TODAY FOR FREE NRI CATALOG!

NRI Schools

4401 Connecticut Avenue, NW, Washington, DC 20008

☒ Check one FREE career catalog only

☐ COMPUTER PROGRAMMING

☐ Networking with Windows NT

☐ Visual Programming in C++

☐ Microcomputer Servicing

☐ Desktop Publishing with PageMaker

☐ Bookkeeping and Accounting

☐ Multimedia Programming

OR GET YOUR DEGREE

☐ New! AAS Degree in

Accounting

☐ New! AAS Degree in

Business Management

Name (please print)

Age

Address

City/State/Zip

A Division of The McGraw-Hill Companies

Accredited Member, Distance
Education and Training Council

5500-1296

Computing's Seven Deadly Sins

People have long used the Seven Deadly Sins to illustrate the most basic flaws of humankind. To many people, these seven words—greed, pride, anger, gluttony, envy, sloth, and lust—represent the origins of much of what they find wrong with the world.

Being a computer-minded bunch here at PC Novice, we thought it would be interesting to see how they apply to the world of computing. It didn't take us long to come up with a handful of examples for each one. So we've assembled our own list, based upon the Big Seven, in an effort to cover the truly fatal flaws that can trip up PC users.

Greed. Greed can easily take hold of the average computer user, especially one who's just purchased a new machine. "I just spent a chunk of money on this thing," you say. "Why not buy some fancy equipment to go along with it?"

Because you probably can get by without it. We think you can skip some of the extras the folks at computer stores want you to consider essential. Besides, after purchasing a new computer, the less extra money you spend, the better.

For example, not everybody who owns a computer needs a top-of-the-line printer. If you're using your computer primarily to access the Internet, balance your checkbook, and write the occasional letter then you probably can get by with a lower cost printer. Why spend money to get the professional-quality output of a high-end inkjet or laser printer when you don't really need it? Put away the money you save or spend some of it on something such as extra random-access memory or a wrist rest for your keyboard.

Later, if you decide a printer has become a necessity, you can head out and buy one, and you can get the latest and greatest.

Another good example is scanners. Whether it's a flatbed (the best) or handheld (the cheapest), few home users really need a scanner. Unless you need to reproduce artwork, scan in text instead of typing it, or do a lot of



desktop publishing, you probably won't use a scanner all that often. You can scan in only so many wacky photos for use as computer wallpaper before the novelty starts to wear off.

Pride. Hubris is the enemy of any computer user. Excessive pride leads to poor decisions and mistakes that can cost you time, money, and patience.

For example, pride might prevent you from calling technical support, even though you just spent \$2,500 on a computer and can't even get it up and running. Sometimes a computer just doesn't work correctly when it's shipped from the factory, and no amount of tinkering or cursing is going to fix it. Once you've done everything you can, including reading the entire user's manual, and after backtracking through your original steps, it's time for some professional help.

Admittedly, the threat of long hold times and automated menus might sometimes keep you from dialing. But, admit it. Sometimes you just don't want to tell a technician that you've never heard of the DEFRAG command.

Most manufacturers offer a number of methods for reaching technical support. While high-tech stuff such as automated voice and faxback systems, World Wide Web sites, bulletin board systems (BBSes), and E-mail addresses are handy, most new users will benefit most from calling a live technician. Don't let pride stop you from getting on the horn and asking for help. Don't be afraid to point out that you're new to this game, and if you think you may have made a mistake during installation, tell them.

Of course, more experienced computer users aren't immune to the folly of pride. Just because you've been around the upgrade block a time or two, or have dealt with your share of DOS problems, doesn't mean you know it all.

If you have a co-worker that's a whiz with DOS and you're not sure how to make some needed changes to your Autoexec.bat file, ask for help. If you want to install a new hard drive but you've got a few things you're unsure about, call technical support and ask. Don't let pride persuade you to dive in head-first, only to find that you'll need your friend, or the folks at technical service, to undo the damage you've done. It's always better to ask for help before you make a mistake.

Anger. Speaking of asking for help, when the time does come to get some assistance from a friend or technical support person, don't take your frustration out on them. While you may have been hard at work trying to figure out your hardware or software problem, they're new to the scene and have nothing to do with your situation.

If you're too angry to explain your problem rationally, take a break and cool off before you call someone. And if you do call technical support and get stuck on hold, don't blame the technician. If you've had to wait for 20 minutes, they have no doubt been on the phone as long or longer trying to help a fellow computer user. Give them a break.

Angry computer operators are also likely to make poor decisions. More often than not, a decision made during a moment of anger and frustration can make a simple problem a more complicated one.

A good example here is your hard drive. If you're having problems and you're getting frustrated, don't rush headfirst into a drastic cure such as wiping it clean. While reformatting your drive can solve some problems, the amount of time it takes to do the job, assuming you have all your software installation diskettes, can be enormous. And you should never reformat your drive without saving all your essential files on diskettes. While you might want to start over with a clean hard drive, you probably don't want to start from scratch with your home finance records and other important documents.

Gluttony. There are numerous areas that we can point to for this one, but the most obvious concerns an area of the computer world drawing heavy attention at the moment—the Internet.

Many people are jumping onto the Internet bandwagon through commercial online services such as America Online (AOL) and CompuServe and through Internet service providers (ISPs). Many people say that time really flies while they're online. And they're right. If you're not careful, "just a few minutes" on the Web turns into a few hours.

And that's where some folks have become gluttonous. While most of us are too busy to spend hours a day visiting Web sites and chatting with other Web-heads, some have seemingly made it their life's work. While we'd rather see people interacting through the Internet than sitting comatose in front of the TV, some users have lost their perspective. We're talking 12 to 14 hours a day or more for some addicts.

If you find yourself repeatedly skipping classes, work, or family events because you can't pull yourself off the 'Net, you probably have a problem. This type of behavior can destroy more than a person's social life and the lives of those around them. Online addicts can head down the road to financial ruin as well. Staying online with a commercial service that charges a per-hour access fee can lead to bills of astronomical proportions.

You should enjoy the Internet, like anything, in moderation.

Another thing that can lead to gluttony is the latest crop of computer games. Like

spending time on the 'Net, it's very easy to get swept up into a competitive game, only to realize the hours have melted away. Know when to say when.

Envy. Computer envy affects even the most stable personalities. It's that feeling you get when friends or co-workers show off their

*Many people never
bother to back up
files, and they end up
wishing they had.*

new computers—the ones with the 200 megahertz (MHz) processors, 8X CD-ROM drives, two gigabyte (GB) hard drives, and remote control mice and keyboards.

If you've been around computers, you know the feeling. It begins with a flash of excitement that stirs the imagination, "Oh, the things I could do with a machine like that!" Then you start to rationalize about all the work you could get done with such a fast computer.

Computer envy can override even the most disciplined person's logic, causing irrational and often expensive reactions. The best way to cope with PC envy is to take a step back and approach the situation rationally.

Most people soon realize that while a fancy new computer would be nice, their word processing program, personal finance software, and Internet access account really don't call for all the power these machines offer. Sure, it would be nice for all those fancy multimedia games, but how many of those games do you actually own or plan to buy?

Most computer users will eventually have to think about buying a new PC, or at least upgrading their current one. The march of technology ensures that. But don't let the sparkle of a new PC sweep away your common sense and persuade you to buy before your time.

Sloth. This word is as ugly as its meaning. In addition to being irritating to the folks around you, sloth can be especially treacherous when it comes to computing. For example, our articles constantly tell users to back up their important files. In fact, we

mentioned it earlier in this story. But many people never bother to do it, and they end up wishing they had.

Backing up files is a simple process, depending on your operating system, and it requires little more than placing a blank diskette in your drive and tapping your mouse button or a few keys. Once you've done it, a power outage, hard drive crash, or system-eating virus can't touch your precious files. But it only works if you do it. So do it.

Another particularly noxious variety of sloth makes people call for computer help before they've even attempted to solve their own problem. It's the opposite of the pride we discussed earlier, and it no doubt drives technical support people up the wall, not to mention the unnecessary hold times you may inflict upon yourself.

Before you call with a question, read the user's manual. These books don't have all the answers, but it's amazing how much information they can pack into a good one. And even if you don't find the answer, the manual can educate you about other aspects of the problem and help you help the technician.

Lust. Sure, you can lust after the newest and fastest computer and the latest software, but that stuff already falls under envy and greed.

We took a broader approach to lust and applied it to those computer users who never seem satisfied with what's available on a technological level. The best that manufacturers have to offer simply isn't good enough for these folks.

A prime example of this phenomenon occurs with operating systems. Yes, Windows 95 is imperfect. So are Windows 3.x, OS/2 Warp, and DOS. But right now, they're the best operating systems PC users can get their hands on.

Instead of lusting after the technology of the future, perhaps you should settle back and take advantage of what is out there now. Instead of giving up on today's software, learn to use it more effectively. Rather than lambasting the latest operating systems, find ways to increase your ability to use them.

We should emphasize that we don't think committing any of these computer sins makes you a bad person. But chances are, you could make your computing experience more pleasant, and productive, by avoiding them. ■

by Tom Mainelli

TSRs

Multitasking The DOS Way



Terminate-and-stay-resident programs (TSRs) offer DOS users a peek at the world of multitasking, which allows them to work in one program and call up a second at the touch of a few keys.

Essentially, TSRs are programs—used in conjunction with DOS or application software—that you load into your computer's random-access memory and then forget. They stay there, hopefully out of the way of your regular programs, until you call them back into service.

Here's where a TSR might come in handy: You're working in your word processing program and need to check the math on a series of figures in your document. If you have a TSR program (such as Starfish Software's *SideKick*) that includes a calculator, you can access it by typing the **hotkeys** (a prescribed combination of keys) bring the program up for you to use. The calculator appears; you do the math, send the program back into hiding, and get back to work on your document.

And that's not all. Other TSR programs (including some built into DOS) offer tools that let you do everything from accessing the

commands you've used recently to monitoring your system for viruses.

Let's look at how TSR programs work, examine their potential pitfalls, and explain how to make them run more efficiently on your computer.

■ **Sleeping, Not Dead.** To use a TSR program, you need to load it into memory. You can do this by typing the correct word or words at the prompt to make the program load into memory every time you boot up your computer. Or you can place the command line in your *Autoexec.bat* file so it loads every time you turn on your PC.

Either way you do it, once you load the program, the phrase "terminate-and-stay-resident" pretty much explains the concept of how it works. After you load the TSR program, it is "terminated." The program isn't really dead; it's just resting. After it's sleeping, the program "stays" in the computer's memory, out of the main program's way.

The only thing the average TSR program does during this downtime is monitor the keyboard input for the hotkey combination that calls it back to work. When you type that combination, the program sees it and comes back to life. So if you have a TSR program that operates as a calculator, when you activate it, it springs from memory and onto your screen over your current program.

Of course, not all TSR programs work the same way. (DOS is never that simple.) DOS' own *DOSKEY* is an example of a TSR program that keeps busy all the time. *DOSKEY*, once loaded, stays active in the background of your main program and keeps track of all the commands you type at the prompt, so you can recall them later. The beauty of *DOSKEY* is, until you access the place (called a **buffer**) where those commands reside, you won't even notice the program running.

If you would like to try loading and running *DOSKEY* and you have DOS 5.0 or newer, at the prompt type

doskey

and press **ENTER**. *DOSKEY* is loaded. Now go back to work for a while. When you're ready to take a look at some of the commands you've entered at the command prompt, just press the **Up** arrow key. Your last command will appear at the prompt. Press it again, and the command before the last appears.

If you really like *DOSKEY*, and you expect to use it every time you turn on your computer, you can add it to your *Autoexec.bat* file, so you don't have to load it manually. Before you add anything to your *Autoexec.bat* file, though, you should save a copy of the file to a diskette, just in case you have problems later.

To save it, insert a blank diskette in your drive, move to your root directory, and type

copy autoexec.bat a:

After you have a copy, you can edit the file, safe in the knowledge that you still own a copy of the original.

To add *DOSKEY* to your *Autoexec.bat* type

edit autoexec.bat

This opens your *Autoexec.bat* file. After you're in the file, place the *DOSKEY* command on its own line. Save your changes to the file and reboot (or restart) your computer.

The DOSKEY TSR program should automatically load.

Another handy TSR program that comes with DOS is the virus detection program called VSAFE, available in versions 6.0 and newer. Once activated, VSAFE scans your computer for viruses.

To load VSAFE, at the prompt type

```
vsafe
```

then just follow the instructions that appear on your screen.

As you can see, a good TSR program can make life with DOS a little more livable. In fact, as with the program VSAFE, some even work to help protect your computer from the forces of evil. Of course, that's when they're working the way they're supposed to work.

■ **On The Fritz.** Like most things associated with computers—and DOS—TSR programs can throw you an occasional curve ball. Some work fine every time, while others seem to crash systems and cause random chaos.

Most of the time, with a little investigation, you'll find that troublesome TSR programs behave the way they do for a reason. The most common reason for a TSR program to cause problems is that it simply doesn't get along with another TSR program on your system.

As we mentioned earlier, each TSR scans the information input from the keyboard to look for its hotkey combination. After the average TSR program has checked the input information, most allow the data to pass on through the rest of the system.

When you load more than one TSR program, they form a line to take a look at the input information. Most of the time, this isn't a problem. But if by some chance you get a TSR program in the line that has the nasty habit of grabbing on and holding bits of the data it scans and not passing them on, you have a problem.

Unfortunately, when this happens, it can be difficult to figure out which TSR is causing the problems. There are several ways to alleviate this tricky situation. If you load your TSR programs manually each time you start your computer, you can reboot your PC and load your TSRs one at a time. Take your time and make sure each TSR program is working before you add the next. When you run into problems, the troublemaker should become obvious.

If you loaded the TSR programs into your Autoexec.bat file, you'll need to go into that file and disable them one by one (starting from the last one loaded). You can do this by deleting the load commands from the Autoexec.bat file or, at the beginning of their command line by typing

```
rem
```

This keeps the command line in place but renders it inoperative. Each time you disable one TSR, reboot the computer and see whether the system returns to normal.

To approach the problem from the other direction, you can clean out all of your TSR programs from the Autoexec.bat file first. Now add your TSRs one at a time, rebooting your computer after each one. This should help you narrow down the problem. Either approach will take some time, so be patient.

After you've found the bad TSR, you have two options. You can try to reload all of your TSR programs in a different order, being sure to place the offending TSR program in a different spot in the line. Or you can check the documentation included with the TSR program and see if there are any tips for handling the problem. If not, you might have to dial up the program's technical support.

Worst-case scenario: leave out the troublemaker TSR.

■ **Cramped Quarters.** Another problem with TSRs is that they can take up too much of the limited memory DOS has to work with.

**Once you've found a way to
make your TSR programs
peacefully co-exist with
each other and the rest of
your system, your DOS
computing experience
will be more enjoyable
and efficient.**

Conventional memory (sometimes called lower memory) is the 640 kilobytes (KB) of the first megabyte of memory that DOS programs can use. The remaining 384KB (**upper memory**) performs other tasks. If you have too many TSR programs running in that first 640KB, your regular program might run too slow to suit you, or it may not run at all. Although you can always ditch a few TSR programs to get things moving again, there is another way.

If you have a 386 or higher machine and DOS 6.0 or newer, you can load TSR programs into your computer's upper memory using MemMaker. If you are running an older version of DOS, upper memory still may be available to you. (For more information, see the sections on MemMaker, Emm386.exe, and Himem.sys in your DOS manual.)

To run MemMaker in DOS 6.0 or newer, type

```
memmaker
```

and press ENTER. Now follow the instructions on-screen to run the MemMaker program.

If you had TSR programs in your Autoexec.bat file when you ran MemMaker, they most likely will have automatically moved to upper memory. This makes more room for other applications to run in conventional memory. If the TSRs haven't moved to upper memory, you can instruct your computer to move them there by typing **lh** in front of their load command lines in the Autoexec.bat file. Now save your work, exit from Autoexec.bat, and restart the computer.

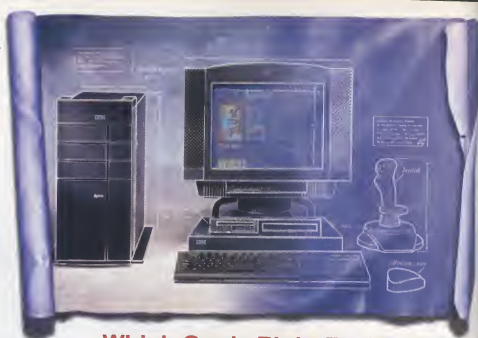
If you normally load your TSR programs at the prompt every time you start your computer, you can just type **lh (LOADHIGH)** in front of the load command (**lh doskey**, for example), and the TSR program will be placed in upper memory.

A quick check of memory (type **mem**) should show your TSR programs operating in upper memory.

Moving your TSR programs to upper memory should help alleviate some of the computer's memory crunch, and your regular programs should run better.

Once you've found a way to make your TSR programs peacefully co-exist with each other and with the rest of your system, they can make your DOS computing experience more enjoyable and more efficient. ■

by Tom Mainelli



Your Guide To The

Holiday Consumer PCs

Which One's Right For You?

Forget any preconceived notions you may have about how a PC should look and feel; home PCs are breaking out of the home office. Consumer computers for the '96 holiday season have discarded their boxy, beige designs and added various new features in an attempt to be considered more than simple computing devices. They've blossomed into communications and entertainment systems the whole family can enjoy.

The trends we saw only starting to develop last year have gone haywire this year. There's more color and wild, curvy designs that let consumers express their personalities and tastes. Last year, most PCs boasted speakerphones and answering systems. This year, the speakerphones are full-duplex (meaning both parties can talk and be heard at the same time), and some systems offer buttons on the outside casing to replay messages.

Eye-catching gimmicks seem to be the new trend. For example, Acer hangs a phone receiver on the side of its monitor. IBM offers a wireless mouse and a bundled joystick, and Sony covers the drives with a sliding purple panel. Also, many of the systems we looked at didn't install all the bundled software on the hard drive. Buyers are given the CD-ROMs and the option to install the software themselves, if they so please, with a built-in Installer program. Other popular features include large hard drives with more than two gigabyte (GB) capacities and fast 8X (eight-

speed) CD-ROM drives that transfer 1,200 kilobytes of data per second (KBps).

We examined all the extras, the bundled software, and how difficult the systems were to set up. We also tested how well the PCs could run graphics-intensive games and a few processing tests. We wouldn't say we found the "perfect PC" for every user, but our findings should help you survive this buying season. We picked our favorite, but remember: Each system has its strong points.

■ **IBM Aptiva S Series.** From the first glance, you know the new Stealth Aptivas, as they were called prerelease, are worth a double-take. IBM has incorporated several different ideas in its new home PCs; some are gimmicks, but some are practical ideas that make a difference once you begin using the system. The ideas were enough to make the IBM our favorite new PC.

It starts with the design. While the main components remain in a minitower unit, the diskette and CD-ROM drives, along with the volume buttons, are incorporated on a black monitor and a black unit about the size of a small pizza box that fits under the monitor. This gets the minitower off the desk and up to 6 feet away. The speakers are built right into the monitor so there's less setup, and they still crank out great sound. IBM even thought to build the microphone into the monitor at mouth-level so you don't have to talk up to a microphone at the top of the monitor, as you do in other systems.

Next, the IBM PC starts up to its AptivaWare Guide. The Guide reminds you of things you need to do first, such as set the date and time and configure your printer. It also offers Windows lessons and computer basics for the real beginner, as well as Useful Information with tutorials, diagnostics, system specs, and tips about features users may not know they have. For instance, IBM includes a Wake-Up On Ring option that powers the computer back on when the phone rings to answer the call. Also, there's a Scheduler to program your computer to perform tasks at specific times, and there's a Rapid Resume that will power your system back on with the same configuration you had when you turned it off. When you click the Update Connector icon, the modem dials an IBM database network that checks the system and then informs you of any free software updates you can download for free.

Other special touches IBM tucked inside include a huge 3.2GB hard drive, three front expansion bays for additional drives, and a great antivirus program that picked up a virus on a diskette that the Windows 95 antivirus program missed. The Aptiva came in second in performance to Gateway's Pentium Pro Destination but outperformed the other similarly equipped 166MHz PCs. If you want to keep up with the technology bandwagon, there's also a DSVD (Digital Simultaneous Voice and Data) modem to talk to other DSVD users as you transmit data, as well as a USB (Universal Serial Bus) port to plug-and-play the new USB devices to be

introduced next year. Of course, the Aptiva S series has its share of impulse items, such as the cordless radio-frequency mouse and an IBM-designed joystick. The software bundle looks big, but some of the programs aren't of the highest quality.

We do have a wish-list for the S series. Next year, we would like to see buttons for the answering machine, phone, and CD player. We'd also like to see a better price; \$3,200 is a little too high for the power you're getting when you compare it to similar systems.

■ **Sony VAIO.** Gamers, take notice. Here's a PC packaged just for you. With killer surround-sound speakers (second only to the Gateway setup) and beefed-up multimedia playback, Sony's first entry into the home market, called the VAIO (Video Audio Integrated Operation), will really get your programs a-rockin'.

VAIO ranked at the top in performance and included all the cool technology extras, such as the DSV2 modem and USB ports. Setup was extremely easy, coming in a close second for "out-of-box experience" with the Acer Aspire. The system features VAIO Space front-end software with big-screen panels for access to your software, phone, and multimedia playback



Sony's new VAIO system comes with front-end software called VAIO Space so users can access software, the phone, and multimedia playback features from big on-screen panels.

options. Here, you also can find an SOS button that automatically will connect you to Sony Support, where a live operator can check your system. A great Welcome program plays videos and music that really show off the system's capabilities.

The software bundle contains several graphics-intensive games and lots of great reference titles for your home library. However, there isn't much to choose from for young children. We would like to see a few buttons for instant control of the answering machine or CD, but maybe we'll get them next year. We were also disappointed in the microphone; it picked up a lot of environmental noise and sounded hollow.

If you buy Sony stereos or VCRs, watch for an upcoming VAIO symbol on Sony's audio and video equipment. The symbol will represent the equipment's convergence with the PC. Future Sony PC peripherals are also supposed to be stackable, much like stereo components. The peripherals will come in 1/2, 1/4, and 1/8 height configurations and will have the same look to match the Sony PC.

■ Gateway 2000 Destination.

There's no way you'd hide this system in your home office, perhaps partly because of the cost. The Gateway 2000 Destination is more than just a home-office appliance; the system is designed to be an integral part of your home entertainment system. The Destination is probably the most impressive thing we've had in our testing lab. It took four people to safely lift the 31-inch television/monitor, which came with a 166MHz Pentium Pro processor plus a handful of programs that really took advantage of the big screen. At a touch of a button, you can watch television or minimize it in the Taskbar. The system we tested also came with the harman/kardon Surround Sound System, which adds a lot to the experience but will cost about \$700. The Sound System also has ports to

The Options

The new holiday systems come loaded with all the extras. We'll sort through these features on the next few pages to help you determine which PC best fits your needs.

IBM Aptiva S66

(800) 426-7235 ext. 4340 (914) 765-1900

Features:

166MHz Pentium	16MB of RAM
3.2GB hard drive	8X CD-ROM drive
256 cache	ATI 3D Rage Chip
2MB video RAM	Radio-frequency cordless mouse
Joystick	33.6Kbps DSV2 fax/modem
16-bit wavetable sound	USB port
Media console	Three-year warranty
Multimedia monitor with built-in speakers and microphone	

Price: \$3,148 with 15-inch monitor

Bundled Software:

MS Works, Creative Writer, Kid's Room, SmartSound SE, Video Puzzle, Video CD Player, Ring Central, Quicken SE, Voice Calculator, Voice Spreadsheet, PC411, Personal Journal, Wall Street Money SE, World's Easiest Personal Image Bundle, IBM AntiVirus, IBM Update Connector, Online Housecall, CompuServe, Prodigy, America Online, Netscape Navigator, IBM Internet Connection Phone, Iomega Guest 95, MS Network, Lotus SmartSuite, MS Encarta '96, World's Greatest Monuments, Caesar II, MechWarrior 2, Great Word Adventure 1, Tuneland, Lost Mind of Dr. Brain, VR Soccer '96, TripMaker '96 SE, TriplePlay Plus Language Sampler, Battle Beast, Sony CD Extra, Jungle Book

Sony VAIO PCV-70

(888) 476-6972

Features:

166MHz Pentium	32MB of RAM
2.1GB hard drive	8X CD-ROM drive
256 cache	3-D Accelerator
2MB video RAM	28.8Kbps DSV2 VoiceView fax/modem
16-bit wavetable sound	SD SRS Surround Sound
USB port	One-year warranty
Multimedia monitor with built-in speakers and microphone	

Price: \$3,078 with 15-inch monitor

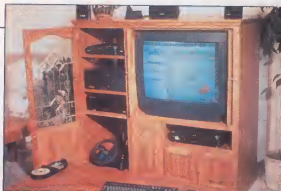
Bundled Software:

MS Works, MechWarrior 2, WipeOut, MS 3D Movie Maker, Sony Video CD-ROM Sampler, Billboard Music Guide, Blockbuster Video Guide to Movies and Videos, Launch, Multimedia World Live, MS Encarta '96, Compton's Interactive Encyclopedia, Reader Rabbit, American Heritage Talking Dictionary, The Family Doctor, MS Money, Quicken SE, DeltaPoint QuickSite, Investor Insight, Sidekick, PC411, Netscape Navigator, MS Internet Explorer, Microsoft Phone, America Online, CompuServe, WOW!, Radish VoiceView, MS Plus, Sony Welcome CD, Karaku Karaoke, Yamaha Visual Arranger

plug in your stereo or VCR. Is Gateway contributing to a new generation of computer couch potatoes?

While the Destination did make us say "wow" and performed well with the software tests we ran, it wasn't at the top of the list. It's probable that the television/PC is the way the home market is going, but it may be a little too early to buy into it yet. We see the Destination as an ideal solution if you are looking for a big-screen entertainment system on which you want to play games or cruise the Internet. But what happens when you are ready to do the family finances or someone has to do their homework and everyone else wants to watch television? We foresee that someday there will be more applications that combine television and computing. For instance, soon we could watch a television show and at a touch of a button, go online to order an official T-shirt or screen saver. In the future, we also could network terminals to the main computer so it can be used for more than one purpose. But for now, the cost is high, and there are still a few glitches. We had problems running the mouse from the remote control, and the wireless keyboard sometimes skipped characters or the keys would stick, making it very hard to type a letter.

One small gripe we had is that there is no microphone, so you'd have to spring for that. Also, give yourself several hours to an entire day to set up the Surround Sound System. You'll have to position the speakers around the room and run the cable back to the main receiver.



The Gateway 2000 Destination, with its 31-inch monitor, belongs out in the living room so users can watch television, play games, or cruise the Internet.

■ **Packard Bell Platinum.**

The new Platinum system is excellent for the not-too-computer-literate consumer who wants all the extras. It has a television tuner, radio, CD player, full-duplex answering machine, and a modem using VoiceView technology so you can talk to someone at the other end of another VoiceView modem. (VoiceView also comes in handy for HelpDesk technical support.) Built-in software lets you converse over a video telephone; you just have to buy an additional camera.

If you don't like the idea of starting with Win95, front-end software called *The Navigator* lets beginners easily locate computer functions in a living-room environment and play the software from virtual "software shelves." For instance, you would click the television in the living room to watch TV or click the phone to access the answering machine or speakerphone. The Navigator also supplies kids and teen-agers with interfaces all their own. We loved the

MediaSelect control panel that sits on the desktop for push-button access to your CD player, television, phone, sound, channel selection, and radio. There is also a light that blinks if you have a phone message or fax. Another button then lets you instantly play the messages.

This system might have been a stronger contender if it had performed better on the tests we ran. The speakers produced great sound at first, but when we turned up the volume to listen to CDs, they started to crackle. The system

takes up a huge amount of desk space, and because the microphone is not built into the monitor, you have to find room for that on your desk as well. The speakers are a nightmare to attach to the monitor, and some of the bundled programs are not that great, placed there to make it look like you are getting a lot for your money.

■ **Compaq Presario 4000.**

While the Compaq Presario was our favorite system last year, it was about average this year. The 4000 systems do have a new curvy, finned design with handy buttons that let you control the speakerphone and CD player. You also can check a blinking light to see whether you have messages, then play them at a push of another button. However, these buttons, including the CD player controls, are on the top of the minitower, forcing you to stand up to

Packard Bell Platinum 65

(800) 733-5858 (818) 865-1555

Features:

166MHz Pentium	24MB of RAM
2GB hard drive	8X CD-ROM drive
256 cache	3-D Graphics/Video accelerator
2MB video RAM	Cable-ready television
16-bit wavetable sound	Microphone
MediaSelect control panel	One-year warranty
BBE High Definition Sound Enhancement	
SRS 3-D Amphitheater Stereo Sound	
28.8Kbps VoiceView fax/modem	
Multimedia monitor with built-in speakers	

Price: \$2,549 with 15-inch monitor

Bundled Software:

Packard Bell Direct Internet Access, Prodigy, America Online, Planet Oasis, CompuServe, MS Network, WOW!, VoiceView Talkshop, WordPerfect Suite, Quattro Pro, Corel Presentations, CorelFLOW, MS Works, Ark Workscape, Janna Contact Lite, Quicken SE, MS Money, Personal Journal, Reuters money Network, MS Encarta '96, Mindscape Student Reference Library, Ark Kidspace, Dinosaur in the Garden, The Little Red Engine, Tuneland, Sony CD Extra, Best of MS Entertainment Pack, Ecco the Dolphin, Comix Zone, Sim City Classic, PrintMaster Gold, PhotoSuite Lite, PC-Doctor

Gateway 2000 Destination

(800) 846-0552 (605) 232-2000

Features:

166MHz Pentium Pro	16MB of RAM
2GB hard drive	8X CD-ROM drive
256 cache	2MB video RAM
Cable-ready TV tuner	Wireless keyboard
Wireless field mouse remote	Four-channel radio frequency receiver
28.8Kbps fax/modem	16-bit wavetable sound
31-inch monitor	Three-year warranty

Price: \$3,799 with monitor

\$699 for Surround Sound Speakers

Bundled Software:

MS Works, Monopoly, MS Plus, The Hive, Mediatics MPEG Arcade Player, You Don't Know Jack, MS Cinemania '96, Quicken SE, MS Encarta '96, Harman Interactive SmartTV Guide, 3D Atlas, Post-It Notes, Nickelodeon Jr. Play Math, Hansel & Gretel and The Enchanted Castle, MS Magic School Bus Explores the Solar System, Launch, Internet access, Call Center, America Online, CompuServe, GNN Network, Prodigy

view them if your minitower is on the desktop.

This system takes up quite a bit of desk space, performed about average on the tasks we asked it to do, and ranked in the middle when it came to setup and "out-of-box experience." We did like the new SmartQ Help Center, which provides information about the system components, and how it places all your technical support and help information in one place. But the online guide failed to mention Compaq's policy of taking credit card numbers for support, then deciding whether to charge you.

The Presarios still feature the latest in technology, incorporating **wavetable** sound built into the hardware so it operates more efficiently, as well as a 33.6Kbps Talk and Send fax/modem with DSVS. (Wavetable is a sound technology previously used exclusively by musicians and computer enthusiasts that produces digital music files in a more realistic way.) A new sleep mode lets the system consume less power while it's not in use, which is helpful if you want to leave it running to answer phone calls. Compaq didn't bundle as many software titles as it has before, but all the included programs are quality products. And the company plans to offer videophone software on its Presarios in December that will work with a new \$199 video camera.

■ **Acer Aspire.** If you're looking for an affordable PC with a little different look, we suggest Acer's Aspire Personal line. You can get a 166MHz Pentium with 16MB of RAM, a 33.6Kbps fax/modem, 2GB hard drive, 8X CD-ROM drive, and a 15-inch monitor for only \$2,298.

Continuing the unique look it started last year, Acer's Aspire systems and multimedia monitors are covered with Swiss-cheese-like holes and come in two funky color combinations: black/charcoal and purple/teal. The new gimmick this year is a telephone receiver that hangs off the side of the monitor and operates just like an ordinary phone. But how necessary is a phone on a computer since the system itself can act as a speakerphone?

Other new features include a Quick Start option that starts the system in three to five seconds and allows the PC to power back on and take phone messages (sort of like Wake-Up On Ring in the IBM). The "Quiet PCs" operate silently, without all that whirring and grinding you may notice in other systems. If you like to give the orders, there's voice activation software so you can command the PC to start programs and do other basic tasks. While voice recognition is not yet in its prime and won't recognize every command you give it, it's kind of a fun addition to the software bundle. The ACE desktop front-end program makes it easy to get to your software because its organized into sections, such as home office, communication, and games. Each grouping also offers phone numbers for tech support of the built-in software.

Out of all the systems we reviewed, the Acer was the easiest and fastest to set up. All the cords and ports are color-coded with indicator icons, and the step-by-step setup sheet was extremely simple to follow. Because the speakers and microphone are built in, you don't have to worry about their setup, and the new phone just slides into place.

However, the Aspire takes up a lot of desk space, and we found that the CD-ROM eject button was a little touchy. You had to punch it just right for it to work. Also, we wished that there were more than just the one empty front bay for additional drives and that the sound quality from the built-in speakers were as good as that on other systems.

■ **The Whole Package.** While these aren't the only home PCs available to consumers, they're some of your strongest options for the '96 holiday season. Other systems with intriguing features that might be worth a look include the new Toshiba Infinia systems with built-in television, radio, and remote control and the Hewlett-Packard Pavilions with built-in photograph scanners. Unfortunately, these companies weren't able to get their systems to us in time for our review.

As you look through the charts we've included to compare the features and costs of each system, remember to check out the warranties before you buy. Also important is the quality of technical support you'll receive if anything goes wrong. We took a closer look at this aspect of computers last month in "Technological Advances In Technical Support" and "Making Contact: Reaching Tech Support Is Half The Battle." Look at the PC as a whole package because just as important as the processing power is the support you will receive later on. ■

by Cindy Krushensky

Compaq Presario 4712

(800) 345-1518

(713) 370-0670

Features:

166MHz Pentium	24MB of RAM
2.5GB hard drive	6X CD-ROM drive
256 cache	3-D Spatializer Surround Sound
JBL Pro audio speakers	1MB video RAM
33.6Kbps DSVS fax/modem	16-bit wavetable sound
USB port	One-year warranty
Multimedia monitor with built-in speakers and microphone	
Push-button control panel on system unit	

Price:

\$2,698 with 15-inch monitor

Bundled Software:

MS Works, Internet Explorer, America Online, Arcade Media Player, GNN Online, CompuServe, Netscape Navigator, SurfWatch, Compaq Phone Center, Compaq Video CD Watcher, Magic Carpet, PGA Tour '96, Quicken SE, MS Network, CyberSynth Keyboard, Corel Draw, Compton's Interactive Encyclopedia, Yukon Trail, Sony CD Extra

Acer Aspire Personal Solution

(800) SEE-ACER

(408) 432-6200

Features:

16MB of RAM	2GB hard drive
8X CD-ROM drive	256 cache
1MB video RAM	Telephone
33.6Kbps fax/modem	16-bit sound
Three-year warranty	
Multimedia monitor with built-in speakers and microphone	
IBM P-166 (same processing speed as 166MHz Pentium)	

Price:

\$2,298 with 15-inch monitor

Bundled Software:

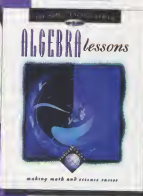
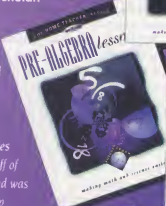
MS 3D Movie Maker, Easy Photo, TripMaker SE, Printmaster Gold, The Incredible Machine, Tyrian, Jazz Jackrabbit, Extreme Pinball, Magic School Bus Explores the Solar System, Safari, Jr. School Trips: Let's Explore the Airport, Telephony Suite, America Online, CyberPatrol, PointCast Network, Internet Browser, MS Network, MS Works, Intopedia, Quicken SE, Quicken Investor Insight, MS Money, The Family Doctor, Entertainment Pack, Verbox Listen for Windows, PC-Doctor Diagnostics

THE HOME TEACHER™ SERIES



Future Graph is a premier publisher of math and science educational software in the United States. Our products are in use in hundreds of the most prestigious schools and universities across the country. The Home Teacher Series was developed using our award winning package **flg** Scholar. Now, with The Home Teacher Series, you can have the same high standards of educational software to use in your own home.

The Home Teacher Series was developed by our staff of teaching professionals and was designed with step by step explanations, understandable examples, and exercises. The Home Teacher Series aims to provide significant assistance to all students by providing a "computer teacher" to help them learn and understand math and science. Whether you are an advanced student, an average student, or need extra help, The Home Teacher Series is the **key** you need to succeed.



Trigonometry Lessons

Trigonometry is the mathematical study of the triangle. The Home Teacher Trigonometry Lessons address the basic concepts of trigonometry including, angles, trigonometric functions and their graphs, solving triangles, and the trigonometric identities.

ages 14 thru adult	MAC WIN	#1000 #1100	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

Geometry Lessons

Geometry is the branch of mathematics that deals with the properties, measurements, and relations between lines, angles, surfaces, and solids. The Home Teacher Geometry Lessons will provide descriptions and explanations of the properties, measurements, transformations, and relationships of basic geometric objects.

ages 12 thru adult	MAC WIN	#7309 #7408	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

Pre-Algebra Lessons

The purpose of The Home Teacher Pre-Algebra Lessons is to teach the mathematics underlying Algebra and higher mathematics. These lessons are a must if taking a Pre-Algebra math course, planning to take Algebra, or various other math courses.

ages 12 thru adult	MAC WIN	#8900 #9006	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

Algebra Lessons

Algebra teaches how to solve problems by using equations, and provides general rules for calculating answers. These lessons cover the topics taught in first year algebra and focus on major topics of Algebra: algebraic properties of operations, symbolic calculations, equations and their graphs. The Home Teacher Algebra Lessons also demonstrates the connection between Algebra and Geometry. Each lesson is highly interactive allowing you to change symbols and values while viewing the solution as it changes, step by step.

ages 13 thru adult	MAC WIN	#9403 #9508	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

Pre-Calculus Lessons

The Home Teacher Pre-Calculus Lessons serve as a bridge between Algebra and Calculus. These lessons will help develop an understanding of the functions, graphs, and equations of mathematics. You will find advanced topics from high school algebra as well as an introduction to the major concepts of calculus such as the derivative and the integral.

ages 15 thru adult	MAC WIN	#9607 #9706	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

Physics Lessons

Physics involves the study of the properties and interaction of matter and energy. The Home Teacher Physics Lessons represent the most complete software tools available for teaching and learning physics. The main objective of these lessons is to help improve comprehension of physics through demonstrations with graphs, formulas, tables, and animations, as well as actual modifiable physics simulations.

ages 15 thru adult	MAC WIN	#1406 #1505	\$32.95 \$32.95
--------------------	------------	----------------	--------------------

order line: **800-532-7634**

Other Titles Available



75 James Way, Southampton, PA 19088
215-398-0720 fax 215-398-0724
www.futuregraph.com



making math and science easier

Choosing Between Business & Family PCs

You've decided to upgrade your home computer, but it's been almost four years since you bought that 386 PC that was pushed to the limit by Microsoft Windows. Not only have computers undergone changes that leave today's PCs light years ahead of that 386 machine, but your computing needs have changed drastically.

Your children have grown, and they're no longer obsessed with using the computer to improve their *Space Invaders* score. Instead, they want to do homework, use reference software, and connect with friends through E-mail. And your needs have changed, too. You're no longer obsessed with improving your *Space Invaders* score either. Instead, you want to connect to your company's network and do work at home one or two days a week. And your spouse's home business is outgrowing handwritten accounting and customer-tracking techniques.

As you ponder your computer search, you'll find two lines of computers available—business computers and family computers. While family PCs are more prevalent in the traditional computer retail settings, it might be worth the additional time you spend searching to purchase a computer from the business line. We'll explain the differences between the two lines of computers and help you decide which best fits your situation.

■ **Business vs. Family.** Some computer companies choose to stay out of the corporate PC market; others avoid the family PC market. But nearly all desktop computer companies offer at least one computer line for the quickly growing SOHO (small-office, home-office) market.

"Between big companies and home use is really what we call the mainstream market," says Steve Keilen, director of desktop computing for Digital Corp., which focuses its efforts on the business market rather than the

family market. "It's a horrible name, but it looks more at the individual's needs rather than that of big companies or homes."

The main differences between business and family PCs are the gadgets and software included. With a family computer, you'll probably receive a modem, speakers, a CD-ROM drive, and a joystick in addition to the vital microprocessor, memory, diskette drive, and hard drive. With a business computer, you won't always find the extra components. Depending upon the computer brand and model, you may have a modem or CD-ROM drive included with your business computer but little else in the way of frills.

Pre-installed software differs greatly, too. A family PC often contains dozens of products, including financial, reference, entertainment, children's, online, Internet, graphics, and appointment software. A business PC usually contains very little pre-installed software and is usually limited to an office suite or communications program.

"A good professional machine sometimes is a good starting point if you're not looking for the bells and whistles in a family machine," says Catherine King, associate manager of corporate communications for Gateway 2000.

Most business PCs would be considered barebones computers by many people, containing little more than the key components. But because the business PCs don't include some of

the extras you'll find on a family PC, the business computers can include better-performing basic components while remaining competitive in price.

"Business computers don't have a bunch of pre-installed applications that people working out of their homes don't need," Digital's Keilen says.

■ Time To Choose.

Deciding whether you need a business PC or a family PC initially involves one simple, but often over-

looked, step.

"The first step to take is figuring out what you need," Gateway's King says. "Take a look at what you're doing. I know that sounds basic, but it's something people don't do all of the time."

For instance, a small business with strong Internet and graphics needs requires a computer with a fast modem (at least 28.8 kilobits per second) and a large hard drive (at least two gigabytes); the company probably won't need a joystick or family-type entertainment software. Meanwhile, at-home business owners who also need a PC for the family may want to purchase a family computer, purchase the business software they need separately, and split the computer's usage time rather than buy two different computers.

After deciding on the line of computer you want, finding reliable support and warranties is vital when making a brand selection, especially for a small-business owner. If your business computer breaks down, you lose productivity, time, and money. If your PC manufacturer has poor repair and support, the losses are compounded. Families usually can get by without a computer that must go in for repairs (it just *seems* like a catastrophe), and large companies usually have employees who fix computer problems for a living.

To help purchasers in their decisions, Gateway begins offering advice and support at the time of the order.



Gleason

"One thing we do, that any good vendor should do, is we don't take any order that makes no sense" in the components the user chooses, King says. "It doesn't do us any good to sell a computer and have the customer be unhappy with it."

Digital, meanwhile, relies on its local dealers to provide support options for its products.

"They're in a good position to read what businesses need in their environment," Keilen says. "Users can talk to them and can specifically describe what they need in detail. A big company typically has a lot of support resources, while the individual is usually stuck on (his) own."

Finding a company that doesn't brag about its great support options is about as difficult as finding a politician who isn't plotting how to break promises made before the election. How can you make sure the support will be there if you need it? King says the best method for finding companies who actually deliver on their support and service promises is to ask other small-business owners about their experiences.

"Ask people who have the same requirements you do," King says. "What type of service comes standard? What services don't I have to pay extra for? Look at what your special needs are and see if the company can meet them."

■ The Search Begins. Finding a business PC on your local retail store shelf traditionally has been almost impossible. Most large electronics stores focus solely on family computers. Major retail outlets, however, are beginning to embrace the ever-growing SOHO computing market.

"They're becoming increasingly aware of the individual user who falls in between the big companies and families," Keilen says.

Still, finding a business computer is far from easy. When researching various brands, you can visit specialized local PC dealers who cater to small businesses. While the large retail stores rarely carry small-business PCs, visiting them can help you get a feel for the various brands available. But the most helpful research probably will come when you visit the computer manufacturers' World Wide Web sites, which usually contain detailed descriptions of the business PCs they offer.

In fact, the Gateway and Dell Web sites let you build your own PC online and then order it. If you don't have Web access or if you'd rather speak with a live person, you can dial the toll-free number for a particular manufacturer to order a business computer, to find a dealer in your area, or to obtain product information.

While you may need to do some extra legwork in finding a business PC, you may find the additional time you spend will result in monetary savings down the road. Because they don't contain all of the family computer's components and software chiefly designed for entertainment, business PCs usually cost less at the time of purchase. You could choose to use the savings to buy a more powerful computer, which may give it a longer, more useful life.

If you own a small business, purchasing a business PC will give you a greater tax write-off as well. With equipment used solely for

business, you can take a 100% deduction. But if you split your computer usage between business and family use, you only can deduct the percentage of the computer's cost equal to the amount of time you use it for business. And if you're ever audited, it'll be a lot easier defending the 100% computer deduction you took if your installed software includes *Quicken* and *Microsoft Office* on a strictly business computer instead of *Doom*, *Space Invaders*, and *Deadlock* on a family computer with all of the frills. ■

by Kyle Schurman

Who's Serving SOHO?

COMPANY	BUSINESS LINES	FAMILY LINES
Acer (800) SEE-ACER (408) 432-6200 http://www.acer.com	Power Entra	Aspire (some home-business features)
AST (800) 876-4278 (714) 727-4141 http://www.ast.com	Bravo	Advantage! (includes divisions in education, gaming, general, home office, & communications)
Compaq (800) 345-1518 (713) 514-0484 http://www.compaq.com	DeskPro (high-end)	Presario (some home-business features)
Dell (800) 678-8649 (512) 338-4400 http://www.dell.com	Dimension OptiPlex (high-end)	
Digital (800) DIGITAL (508) 493-5111 http://www.pc.digital.com	Venturis Celebris (high-end)	
Gateway (800) 846-4208 (605) 232-2000 http://www.gw2k.com	Professional System	Family PC XL System
Hewlett-Packard (800) 724-6631 (general) (800) 243-9812 (reseller list) (415) 857-1501 http://www.hp.com	Vectra 500	Pavillon
IBM (800) 426-2968 (914) 765-1900 http://www.pc.ibm.com	PC 700 PC 300	Activa (some home-business features)
Packard Bell (800) 733-4433 (often busy) (916) 388-0101 (toll call) http://www.packardbell.com		Multimedia Platinum (some home-business features)

SIX DIFFERENT MEDICAL SPECIALISTS

24 HOURS A DAY!



DR. SCHUELER'S

MEDICAL CENTER 6

SIX CD-ROM VALUE PAK

"ALL 6 For \$39.95"

SIX CD-ROM VALUE PAK!

ONLY \$39.95 TO ORDER CALL 1-800-788-2099

VISA • MASTERCARD • AMERICAN EXPRESS • DISCOVER

Pharmacist On Call

Do you know that over a quarter-million people were hospitalized this year due to harmful reactions to medications. Don't take another pill without consulting **Dr. Schueler's, The Corner Drug Store LE**. Detailed information on over 8,000 prescription and nonprescription drugs, cross-referenced with tons of full-motion video!

Adventures In Anatomy!

Discover the miracle of the human machine with **BODYWORKS 3.0 CD**. Features include: 3D rotating views, colorful anatomic graphics with cutaways and magnified views, "speech back" pronunciation of terms, phonetic "smart search" complete health section, lesson plans and quizzes, printable graphics and text, animations, and full-motion videos.

The Doctor Is In!

Award-winning **Home Medical Advisor Pro V4** combines video, sound, and thousands of images to produce a "multimedia doctor" that can diagnose, talk, access disease information and thousands of other health topics. Endorsed by the American College of Emergency Physicians and winner of the 1995 **National Health Information Award!**

OVER \$250 IN VALUABLE SOFTWARE!

Secrets To Burn Fat & Build Muscle Fast!

Discover the secrets that can help you get those washboard abs, the super low body fat look, and superior health. **BodyCraft** is an exciting new software technology based on a proven scientific method developed by renowned scientist, Dr. Fred Hatfield. Your new body is in this box!

Virtual Autopsy!

Ever seen a real autopsy? **Visual Man 2.0 Lite** includes hundreds of cross-sectional images of a human cadaver in astonishing detail! Digital photographs of more than 1,800 images taken from the body of an executed murderer provide one of the most powerful and informative learning experiences on CD-ROM. Derived from the National Library of Medicine, Visible Human Project.

Disease Prevention Made Easy!

With over 70 million people in the U.S. suffering from heart disease and cancer, can you afford to take chances with your health? **Dr. Schueler's SelfHealth** performs complex health risk analysis, creates customized medical-legal documents, has extensive libraries on preventive medicine and a medical glossary that pronounces medical terms with a mouse click.

REQUIREMENTS: WINDOWS 3.1 OR WIN 95

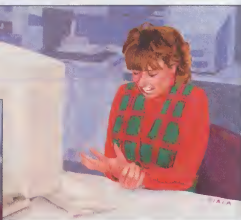
Dr. Schueler's Health Informatics, Inc. P.O. Drawer 410129 • Melbourne, FL 32941-0129

Fax: 407-777-0323 <http://www.drschueler.com>

All trademarks and registered trademarks are the property of their respective owners
Outside The U.S. Please Call: 407-779-0310

Input Devices

Can The Right Ones Prevent Pain?



Ergonomics" is a current computing buzzword almost as popular as Web surfing, Pentium Pro, and voice-recognition software. Well... maybe not voice-recognition software. But some people say so-called ergonomic input devices have something in common with voice-recognition software: Both may rank among the most overhyped computer products in recent memory. Others say some brands of ergonomic input devices, which are designed with the human form in mind, can be helpful, but only when used in conjunction with proper typing techniques.

Regardless of whether ergonomic keyboards and mice are more myth than substance, one thing is certain. **Repetitive Strain Injuries (RSI)** are a very real problem for thousands of people. According to the Occupational Safety and Health Administration, as many as one-third of people who regularly use word processing programs will experience some symptoms associated with RSI.

Repeated movements that overuse and misuse tendons, nerves, and muscles cause the problem. RSI, also called Cumulative Trauma Disorder, Repetitive Stress Injury, Repetitive Motion Syndrome, and Occupational Overuse Syndrome, are different from sprains because they develop slowly over time. RSI are different from the well-publicized Carpal Tunnel Syndrome (CTS), which causes more serious injuries but doesn't result from computer use very often.

What's to blame for a substantial increase in RSI in recent years? Mostly the rising use of computers combined with poor typing technique. The flat keyboards used with most

computers allow high-speed typing, causing overuse of soft body tissues. When such speedy typing is combined with poor positioning of fingers, hands, wrists, and arms, the subsequent misuse leads to injuries. Extended use of pointing devices, such as mice and trackballs, with improper technique also contributes to RSI.

How can you prevent such problems? Ergonomists say body positioning, periodic rests during computer sessions, and typing technique all are important. There still is a debate, however, about the benefits of specialized input devices that tout themselves as ergonomic.

■ **Ergonomics.** Ergonomics, also known as human factors, deals with the interaction between humans and technology. It's a scientific approach to product design that focuses on usability and aesthetics, including safety, health, environment, workplace layout, and job training. Ergonomists seek the correct balance among productivity, quality, and safety.

Ergonomists have been extremely busy in recent years studying the correlation between computer use and RSI. (See sidebar.) At the same time, computer companies have created input products they say will prevent the onset of RSI or alleviate pain from such injuries.

Ergonomically designed (also called alternative) keyboards and keyboard arrangements are made by companies such as Microsoft, Cirque, Kinesis, and Proformix. Most of these keyboards use a design that splits the keyboard in the middle, angling the keys on each side to match your hands' natural positions. The keyboards are curved from front to back and right to left, again attempting to fit the curve of your

hands more naturally. They're wider than standard keyboards, providing a built-in wrist rest. Some contain built-in pointing devices.

Pointing devices can be ergonomically designed as well. Logitech, Contour Design, and Microsoft have specially made mice and trackballs, while Cirque manufactures its GlidePoint touchpad product. Most ergonomic pointing devices use a rounded shape to naturally fit the hand. They also let users assign common tasks, such as double-clicking, to one button, which limits the number of required movements.

■ **Finding One For You.** Cirque of Salt Lake City, Utah, manufactures the Wave Keyboard, which incorporates a GlidePoint into its design. Cirque doesn't label its products as ergonomic; rather, the company calls the Wave a "responsibly designed keyboard," says Angela Keeney, manager of corporate communications. Keeney says customers who used the GlidePoint touchpad with their portable computers soon requested it be made available for desktop computers, too.

"And now that people are more concerned with ergonomic issues and RSI, people are interested in having a safer working environment," she says.

Development of the Wave Keyboard allowed Cirque to meet its customers' needs while addressing ergonomic issues. Keeney says Cirque developed the Wave after gathering advice from several ergonomic companies and after performing extensive testing with users.

We found the Wave to be extremely comfortable. But that doesn't necessarily mean everyone will enjoy the same comfort level with it. Because each alternative keyboard is designed differently, different muscles in your hands and arms will be used, meaning each person finds comfort with different products.

Many stores have 30-day return policies; take advantage of them to test ergonomic products, says Dan Wallach, a graduate student at Princeton University's Department of Computer Science.

"Just like a pair of shoes, what fits me best isn't necessarily best for you," says Wallach, who runs the Typing Injury FAQ: Keyboard Alternatives Web site. (Listed in sidebar.) "In the case of people with injuries, this becomes especially important. If you have an injury, you need to make sure your spiffy new keyboard doesn't make your problem worse."

■ Proper Technique. While using a comfortable keyboard may alleviate pain from RSI, a new input device alone won't prevent RSI.

"We're all big on technical fixes," says Paul Marxhausen, electronics technician at the University of Nebraska-Lincoln. "If we get the right gadgets, we think we don't have anything to worry about. In fact, you can use the



Cirque's Wave Keyboard and similar devices try to encourage proper typing techniques.

same bad posture and dangerous work habits with the finest ergonomic keyboard made and still get injured. Conversely, attention to typing technique, posture, etc., is effective prevention even with conventional equipment.

"Having said that, it is valid to say that RSI prevention involves a lot of things working together, and I think there are keyboards and mice that are better than others," says Marxhausen, who suffers from RSI. "If I slap down a nice Kinesis keyboard on our secretary's desk, but it's still way too high and she has a bad chair and has to hunch over to reach it, its value is nil."

Proper positioning of the equipment on the desk can provide as much or more benefit than an alternative keyboard, says Alan Hedge, professor of Human Factors and Ergonomics at Cornell University in Ithaca, N.Y.

"A conventional keyboard and mouse can be used safely if used in a preset tilt-down keyboard arrangement," Hedge says. "A split keyboard, like the Microsoft Natural, can also be safely used in a preset tilt-down system, whereas

putting this onto a desk or a regular tray will not give the user the full benefit of this design. Similarly where the mouse is used, the position of the arm and wrist is more important for RSI risks than the actual design of the mouse."

Wallach, who is an RSI sufferer, says experimentation—whether it's finding a new input device or changing your work habits—is important in alleviating RSI pain. He discovered wearing long-sleeved shirts kept his wrists warm and alleviated some of his discomfort. Taking breaks at various times during the working day is important, too.

"Learn to listen to your body," Wallach says. "If you learn something new about yourself, such as your hands work better when they're warm, take action on that."

Some people tout the benefits of several specialized techniques, such as finger- and wrist-stretching exercises. But Hedge says there's no evidence that supports these techniques.

"There's no good evidence that I'm aware of that stretches really help reduce injury risks," he says. "Rest periods help reduce risks to the extent that if you don't use your hands, you won't get injured. However, productivity takes a nose dive. You can sustain performance if you are working in a proper ergonomic posture." ■

by Kyle Schurman

For More Information:

Cirque
(800) GLIDE-75, (801) 467-1100
<http://www.glidepoint.com>

Contour Design
(800) 462-6678, (603) 893-4556
<http://www.contourdes.com>

Kinesis
(800) 454-6374, (206) 402-8100
<http://kinesis-ergo.com>

Logitech
(800) 231-7717, (510) 795-8500
<http://www.logitech.com>

Microsoft
(800) 426-9400, (206) 882-8080
<http://www.microsoft.com>

Proformix
(800) 973-2739, (908) 534-6400
<http://www.clarityconnect.com/webpages/ergonomics/Proformix/default.html>

RSI Fact File

Causes:

- Repetitive tasks, such as several hours of keyboarding or using a mouse.
- Working in an awkward position or holding a position for a long time.
- Lack of rest during above activities, especially if your movements don't vary.

Symptoms:

- Tightness, stiffness, tingling, numbness, or pain in the hands, wrists, fingers, forearms, neck, and back.
- Loss of strength and coordination
- Feeling a need to rest and massage your hands, wrists, and arms.
- The strength and frequency of the symptoms provide clues to the severity of the injury.

Prevention:

- Correct typing technique; avoiding awkward reaches; using good posture.
- Wrist rests only should be used when resting, not while typing.
- Use arms to move hands while typing; don't stretch with your wrists.
- Fingers should be in a straight line with forearms, with no bending of wrists.
- Take breaks to stretch and relax.
- Eliminate unnecessary PC usage.

Helpful Web Sites

<http://engr-www.unl.edu/ee/eeshop/rsi.html>

University of Nebraska site describing RSI as caused by computers, advice on prevention, and diagrams.

<http://ergo.human.cornell.edu>
Cornell University site with advice on choosing a keyboard and using your mouse to prevent injuries.

<http://www.agilecorp.com/ergonomics/AboutThisSite.html>

Data about ergonomics and products.
<http://www.cs.princeton.edu/~dwa/llach/ifaq/keyboards.html>

The Typing Injury FAQ: Keyboard Alternatives Web site is a great resource for information on particular keyboards.

<http://web.mit.edu/1962/tiserve.mit.edu/9000/34823.html>

Advice on symptoms and prevention of RSI.

WordPerfect 6.1

Taking A Different View



Have you ever set up a header, returned to your document, and had a momentary sense of alarm when it didn't appear on the screen? A look at Reveal Codes shows that the header command is there. Why isn't it on the screen? Before you panic, select View to see what view mode you're in. The current mode determines which WordPerfect features are displayed in the document window.

WordPerfect documents can be viewed in three modes—Draft, Page, and Two Page. Depending upon your document, you may find one mode more useful than another. The Draft mode, for example, doesn't include all the features Page mode does, such as headers.

■ The View Modes. The Draft mode displays your document close to the way it will look when printed. Font attributes such as bold, italics, and underline can be seen on your screen. Draft mode, however, does not include features such as headers, footers, watermarks, and rotated text. Page breaks, while visible, are displayed in a way that takes up less space in the document window. A thin line indicates the page break, and any blank space at the bottom of a page is not shown.

The advantage to working in Draft mode is that you can work much faster. In this mode, WordPerfect doesn't have to display your document exactly as it will appear when printed, which eliminates elements that take time to load and screen space to display.

Page mode provides a full WYSIWYG (What You See Is What You Get) environment. It displays your document on the screen just as it will look when printed. For example, it includes rotated text, watermarks, headers, and footers. Each time you begin a new page, the entire page is created on the screen, even if most of it is blank. With

the scroll bars, you can scroll to the bottom of the page.

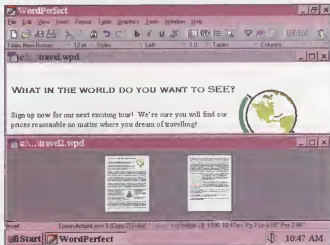
Because the Page mode shows your document as it will look when printed, items that do not print (such as comments) are displayed as icons. To view the contents, click the icon.

The Two Page mode is similar to Page mode, except that two consecutive pages are displayed side-by-side on the screen. The left-hand page will be whatever page your cursor was on when you selected the Two Page view mode. Press Page Up or Page Down to move between pages.

To change the view mode, select View and then choose Draft, Page, or Two Page. You can change the default view mode for WordPerfect documents by selecting Edit, Preferences, Display. Then choose View, Zoom and select the default view you want. Choose OK and Close to return to your document.

■ Changing Text Display Size. One size doesn't fit all when you are viewing a document. Sometimes you want to see the entire page to check formatting and placement of graphics; other times, you may want to focus on a small part of a page. The Zoom feature lets you change the size of the text and graphics displayed on your screen. It won't affect the size of the printed document.

The first time you use WordPerfect, the text in your document is displayed at a zoom percentage of 100%. This setting means that the text on your screen will look similar to the printed version. You can specify a zoom percentage between 25% and 400%. Select View, Zoom to display the Zoom dialog box. You can select from a list of the five most common settings (50, 75, 100, 150, and 200%) or enter a setting of your choice.



See the same document in different ways. The top view is in Page mode; the bottom is in Two Page mode.

The following three options are also available in the Zoom dialog box: Margin Width, Page Width, and Full Page. Margin Width displays a complete line or block of text within the document window, with minimal white space to the right and left of the text. Page Width displays the width of the page, including any margins, within the document window. Using this option, you can display the full width of an envelope, for example. The Full Page width option displays all page margins in the window (left, right, top, and bottom).

Zoom options can't be used when you are in Two Page view mode. You must be in Draft or Page mode to increase or decrease the display size. To change the default zoom percentage, select Edit, Preferences, Display. Then choose View, Zoom and select the zoom percentage you want for your WordPerfect documents. Choose OK and Close to return to your document.

The view mode and zoom features are easy to use. By trying different view modes and zoom percentages, you can find the document appearance that makes work easiest. ■

by Diane Kaye Walkowiak

Lotus 1-2-3 5.0 For Windows

Freezing Rows & Columns



SPREADSHEETS

ave you ever scrolled through a Lotus 1-2-3 worksheet and lost your place because your column and row headings disappeared? Ever wonder if you are entering that

number in the correct row or column?

End your confusion by freezing rows and columns as titles so they remain visible as you move through the worksheet. The headings that describe your data always will be in sight, saving you time and preventing mistakes.

You can freeze rows, columns, or a combination of both. Although you can freeze as many as you want, it's advisable to set only a few as titles so you can still view your data on the screen. The setting is not permanent; frozen rows and columns can be cleared if needed.

■ Setting Frozen Titles.

Rows and columns that are frozen in place are referred to as "frozen titles." The placement of your cell pointer determines which rows and columns will be frozen, so it's important to position it correctly.

To freeze rows, move the cell pointer one cell below the row(s) you want to freeze.

To freeze columns, position the cell pointer one cell to the right of the column(s) you want to freeze.

To freeze both rows and columns, move the cell pointer to the cell immediately below the row(s) and to the right of the column(s) you want to freeze.

After you have correctly positioned your cell pointer, choose Freeze Titles from the View menu (View, Freeze Titles). Then select either Rows, Columns, or Both to indicate what you want to freeze. Click OK. As you scroll through the worksheet, the row(s) and column(s) you froze as titles will remain visible.

As you scroll, notice that the cell pointer will not move into the frozen area. To move the cell pointer to a cell that has been frozen, press F5 (Goto) and specify the cell you want to move to. A second set of titles will be displayed that can be used to edit the original titles. If this duplication is distracting, you can

difficult to keep track of. Fortunately, Lotus 1-2-3 lets you freeze titles on printed pages as well as the on-screen worksheet.

Adding print titles is similar to setting up frozen titles on the screen. You can set up rows, columns, or both. Row titles print along the top edge of each page, and column titles print along the left edge of each page. Again, although you can set as many rows and columns as you want, it is most practical to select only a few.

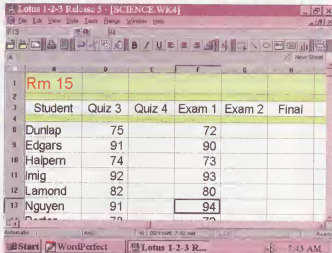
To set up print titles, choose File, Page Setup. Under Print Titles, enter a range of cells for horizontal titles (rows) in the Rows text box and a range for vertical titles (columns) in the Columns text box. Choose OK to return to your worksheet. The range you specify needs to include only one cell from each column or row. For example, the range A3 in the Rows text box would set row 3 as the title; in the Columns text box, it would

set column A as the title.

Do not include the print titles in your print range, or they will print twice (once as a title and again as part of the print range). The default is to print the current worksheet, which will cause duplication. To avoid this, select File, Print and click Selected Range. Specify a print range that excludes the titles and choose OK. Lotus 1-2-3 uses only the rows and columns that correspond to the print range, so if you set column A for the title and had a print range of C4..C16, the contents of A4..A16 would be printed as the title.

To check whether your worksheet titles are printing correctly, choose File, Print Preview. This will display the printout on your screen so you can check it before printing it on paper. ■

by Diane Kaye Walkowiak



In Lotus 1-2-3, row and column headings can be frozen so they remain visible as you scroll through a worksheet.

clear the titles, make changes, and then set the titles again. To clear the titles, choose View, Clear Titles.

■ **Notes To Know.** If you freeze titles and then reduce the worksheet to a size that causes the cell pointer to disappear, the frozen titles will be automatically unfrozen. To restore the frozen titles, increase the size of the window and refreeze the titles.

If you move the cell pointer into the title area when you specify a cell range during a command or in Point mode while entering a formula, a second set of titles will be temporarily displayed. When you return to Ready mode, the second set will disappear.

■ **Adding Print Titles.** It also can be confusing to print a large worksheet and have the headings print only on the first page. Without the guidance of row and column headings, the data on subsequent pages is

PageMaker 6.01

Using Tabs

6.01 FOR WINDOWS



ake it easy on that Spacebar! To create professional-looking documents in PageMaker, you must never insert more than one space after punctuation marks separating two sentences. This spacing rule applies to all Windows-based applications preparing text for printed output. That's because Windows programs typically use fonts with proportionally spaced characters, unlike typewriters which use fonts with fixed-width or monospaced characters.

The width of proportional characters varies. For example, the letter *t* takes up proportionately less space than the letter *w*. Separating these proportional characters by more than one space results in visual distraction.

■ Neatness Counts. Lining up PageMaker words and numbers using the Spacebar results in misaligned columns. To get columns to line up correctly, *always* use the TAB key. This is especially true when creating lists and tables of contents.

PageMaker supports four kinds of tabs: Left (aligns text inward to the right of a tab marker); Right (aligns text inward to the left of a tab marker); Center (centers text on both sides of a tab marker); and Decimal (lines up numbers at a decimal point). You can apply a "leader" of any style to any tab so that a series of characters (such as dots or dashes) automatically insert between a tab and the text that precedes it.

Here's how to create a spiffy-looking table of contents using periods (...) for the tab leader:

1. Choose File, New.

2. Set up your document page as follows: Page Size - Letter; Dimensions - 8.5-inch x 11-inch; Orientation - Tall; Options - Double-sided; Facing pages; Number of pages - 1; Start page # - 1; Margins - Inside 1 inch, Outside 0.75 inch, Top 0.75 inch, and Bottom 0.75 inch.

3. Select 75% view from the View submenu (under Layout menu), or to view a page in Actual Size, left-click the magnifying glass in the Toolbox palette. If the Toolbox is not visible, select Window, Toolbox.

4. Left-click the text tool in the Toolbox palette. Left-click in the upper-left corner of the page to create an insertion point. Type Table of Contents:

5. Triple left-click to select this entire line, choose 18-point size from the text Control Palette, or select 18 from the Size submenu (under Type).

6. With the line still highlighted, choose Type, Indents/Tabs or press CTRL-I. If the Indents/Tabs dialog box obscures your text view, left-click anywhere on the Indents/Tabs title bar, then (with button held down) drag the dialog box to a new position.

7. Left-click the right set tab marker icon (an arrow pointing down with an arm on top pointing left), then left-click the mouse in the Inches field (or press TAB until the insertion point appears in the inches field). Enter 6.

8. Left-click the Position button, then select Add tab from the drop-down list. A marker appears on the Tab ruler at the 6-inch mark. Left-click OK.

9. With Text tool still selected, insert the pointer at the end of the Table of Contents heading, then press the TAB key. The insertion point should jump to the 7-inch mark on the page, since the document was formatted to have an Inside margin of 1 inch.

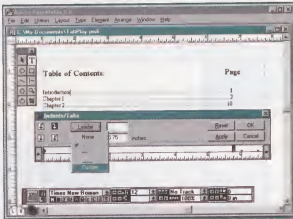
10. Type Page. Text flows inward to the left of the right tab marker. Press ENTER twice.

11. Change the type size to 12.

12. Type Introduction, then press CTRL-I.

13. Select the Right tab icon on the Tabs ruler; left-click the Position button, then select the Delete tab. It deletes the tab setting for the previous tab marker at the 6-inch mark.

14. Enter 5.75 in the Inches field.



PageMaker's Indents/Tabs dialog box lets you customize documents with its support for user-defined Tab leaders.

15. Left-click the Position button again, then select the Add tab. A Right tab marker appears on the Indents/Tabs ruler at the 5.75-inch mark.

16. Don't left-click the OK button yet. Instead, left-click the Leader button, then choose the series of periods. Left-click Apply to view the tab leader. Left-click OK to accept the leader and return to the document.

The cursor insertion point should be positioned just after Introduction but before the tab leader. Press the TAB key, then type 1. Press ENTER.

17. Type Chapter 1, then press the TAB key. A line of dots appears.

18. Type in 2. Press ENTER.

19. Type Chapter 2, press TAB. A second Tab leader line appears. Enter 10.

If you prefer to designate a different tab leader from the row of dots, insert the cursor just before the tab leader you want to change, press CTRL-I, left-click the Leader button, then choose Custom from the drop-down list.

20. Type in the character you want to display, such as SHIFT-8 for an asterisk. Left-click Apply to view the change. If you like its effect, left-click OK. ■

by Carol S. Holzberg, Ph.D.

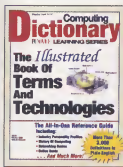
The Perfect Gift!

Computing Dictionary

PCNOVICE LEARNING SERIES

PC Novice has the perfect gift idea for all those computer users on your list—the PC Novice Dictionary!

In addition to more than 3,000 plain-English definitions, you'll find out . . .



WHY the computing industry is the way it is today.
WHEN milestones in the development of computers occurred.
WHO made important discoveries or contributions to computers.
WHAT parts make up a personal computer.
HOW networks fit into the world of computers.
WHERE the information on the Internet comes from.

Don't wait! Order today!

Call 1-800-367-7333 to order by credit card
or fax your order to 402-479-2193
or send check or money order to:
PC Novice
PO Box 82511 • Lincoln, NE 68501-2511
Allow 10 days for delivery.

\$12.95

(Shipping & Handling Included)

Add \$20.00 for Overseas S&H

Gift from:

111596

Name: _____
Co. Name: _____
Phone: (____) _____
Address: _____
City: _____ State: _____ Zip: _____
Credit Card #: _____
Exp. Date: _____ Signature: _____

Gift to:

Name: _____
Co. Name: _____
Address: _____
City: _____ State: _____ Zip: _____



Personal Message:

Microsoft Word 6.0

Navigational Aides



he flexible *Microsoft Word* gives users a choice in how to get around the screen. They can control the program with mouse movements, keystroke shortcuts, or a combination of both to maximize productivity.

Most Word users know that clicking the mouse on the up and down arrows in the vertical scroll bar (along the right side of the screen) moves you through the current document one line at a time. Clicking the left and right scroll arrows at the bottom of the screen results in small horizontal movements.

However, if you click the gray area above or below the scroll box in the vertical scroll bar, you move through the active document one full screen or window at a time. And, if you click the double arrow buttons at the bottom of the vertical scroll bar (available in Page Layout view) you "page jump." To move to the top of the previous page, click the button with the pair of up arrows. To jump to the bottom of the next page, click the button with the pair of down arrows.

Word also lets you split a window into separate panes. This comes in handy when you need to examine two views of the same document simultaneously (such as when you must move text or graphics to a new location in a long document). If you point to the split box area (the rectangular colored strip located just above the up arrow on the vertical scroll bar), the mouse pointer changes to a "split indicator." Click and drag this indicator down until it gives you the view you want. Now you'll have two independent window panes, each with a vertical scroll bar containing up and down scroll arrows. To restore your document to a single pane, point the cursor at the split box. When the cursor changes to a split indicator, simply double-click this bar. Double-clicking the rectangular strip a second time restores the previous split pane configuration.

In Page Layout view, if you double-click the mouse on either the horizontal or vertical

ruler, Word pops up the Page Setup dialog box, letting you set document margins, choose paper size, select paper sources for the pages of your document, and set page layout options for headers and footers, section breaks, vertical alignment, and line numbers.

If you click the Tab marker to the left of the horizontal ruler, you can cycle through Word's Tab options. Then click the horizontal ruler any place you want to position a Tab marker.

■ Right On. Clicking the right mouse button on text brings up a context-sensitive menu of formatting options. For example, if you select text and then right-click, Word displays a menu with Cut, Copy, Paste, Font, Paragraph, and Bullets/Numbering options. Choosing Font lets you modify the typeface. The Paragraph option displays the Paragraph dialog box with options to configure indentation, line spacing, and text flow (e.g., Widow/Orphan control, line breaks within a paragraph, and page breaks). Bullets and Numbering lets you format bullet styles within a list or set up paragraphs for hanging indents.

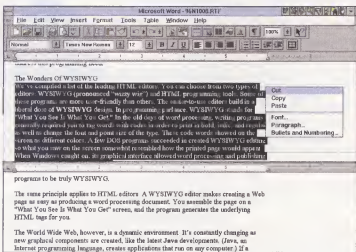
Right-clicking any Word toolbar pops up a list of all available Word toolbars, showing you which ones are currently selected. If you click the Toolbars option in this list, the Toolbar dialog box pops up, giving you the option of creating new toolbars and displaying or hiding selected toolbars. Similarly, click the Customize

function in the list that appears when you right-click a toolbar to get the Customize dialog box. Here, you control which toolbar icons display, which functions appear in pull-down menus, and which keyboard shortcuts activate specified commands.

■ Text Tips. Double-clicking a document word selects that word. Triple-clicking a word selects an entire paragraph (so does double-clicking in the blank margin to the left of the paragraph). Here are a few other text tips:

- To select a sentence, press the CTRL key as you click in a sentence.
- To select a single line, position the cursor in the blank margin to the left of the text. When the cursor changes to an arrow, click.
- To select multiple lines of text, position the cursor in the blank margin to the left of the text. When the cursor changes to an arrow, click and drag the mouse up or down to select other lines.
- To select the entire document, position the cursor in the blank margin to the left of the text, press the CTRL key, then click.
- To select a rectangular block of text, position the cursor at the top left of the desired area, press the ALT key, then drag the cursor to select the block. ■

by Carol S. Holzberg, Ph.D.



Work more intelligently in *Word* by learning tricks such as splitting your view into two panes and using right-click menu functions.

Call now for FREE FACTS!

IBM-
compatible
PC!
Details
below

40+ hottest businesses you can run from your home with a computer!



"Call anytime" service.
Unique telephone and online
support service gives you
access to direct assistance
whenever you need it.

NEW!
Income-generating
programs give you
10 free hours of
access to Prodigy,
America Online
and CompuServe



Combo color TV/VCR
for video sales
presentations

Home-Business
Setups Include:

Pentium® Processor-
based Computer with...

- High-speed central processing unit
- 2-GIG IDE hard drive
- 14" SVGA color monitor
- 16 MB RAM
- High-density 3 1/2" disk drive
- 28.8 baud fax/modem
- Windows 95

Comprehensive manuals
show you how to run
our program in simple
easy-to-follow steps.

High-performance
laser printer

The finest income-
generating software
ever developed...
anywhere!

Fax Machine/Photocopier/Telephone

CBSI Home Businesses include everything you need! All shipped right to your doorstep—so you get started fast!

Keep your present job
while you start your own business!

Call CBSI toll free to get free facts on
how you can begin part time in your own
home-based, computer-driven business
while you retain the security of your
present job.

Choose from over 40 businesses you can
operate from your own home!

Our step-by-step approach lets you
choose from over 40 exciting businesses
that anyone can run from his or her own
home—and you need no previous
experience—we train you from the
ground up!

No Obligation.
No Salesman
Will Visit You.

Here are some of the CBSI services you get
—so you're up and running right away...

- Equipment and software—
customized to your special needs.
- Accelerated training—our system
gets you up to speed at your very first
sitting at the computer. You need no
previous experience!
- Earn as you learn—build a business
step by step as you train. Begin your
business part time and provide addi-
tional services as you go along.
- Telephone and online support—
technical, advertising and business
advice—it's there from our experts
whenever you need it!
- Financing available

- Computer and printer included—you
get our custom-designed software and busi-
ness programs plus a powerful Pentium®
processor-based IBM-compatible computer
system, SVGA color monitor and printer.
- Get 10 free hours of online time on
Prodigy, CompuServe and America
Online.

Call for Free Information Portfolio.

Find out all about our track record of
training other couples and individuals
to start their own
exciting home-based
businesses. Call now
for free information.

40+ Businesses
You Can
Run At Home



To get your FREE Information Portfolio—including audiocassettes

and color literature with all the facts—call 1-800-343-8014, ext. 4009 or write:

Computer Business Services, Inc., CBSI Plaza, Ste. 4009, Sheridan, IN 46069

Word Pro 96

Using The WordPerfect SwitchKit

96 FOR WINDOWS



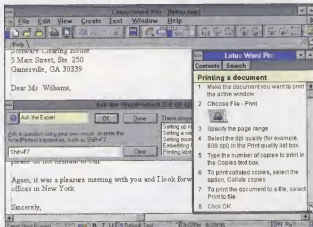
Imagine the following scenario: You're a loyal WordPerfect 5.1 for DOS user with years of experience with the popular word processor. However, you were recently hired by a national firm to fill a position that includes more responsibilities, a big raise, and . . . a computer loaded with Lotus' Windows-based Word Pro word processor.

First, you celebrate. Then you call Lotus to order the free WordPerfect to Word Pro SwitchKit. The SwitchKit consists of software and a manual designed to help WordPerfect users switch to Word Pro. The software installs directly into Word Pro, adding a new Help For WordPerfect Users option in Word Pro's Help menu. The manual explains the WordPerfect software, covers Word Pro basics, and offers pointers on the conversion of WordPerfect files to Word Pro format.

The free SwitchKit is available for both Windows 3.1 and Windows 95 versions of Word Pro. North American customers can receive the kit by calling (800) TRADEUP, extension C130. Or, you can go to Lotus' Internet home page at <http://www.lotus.com> and download the software or fill out an E-mail form asking for the kit to be mailed.

How It Works. Once you receive and install the SwitchKit, you're ready to begin learning Word Pro while relying on your knowledge of WordPerfect. First, start Word Pro and choose the Help menu's For WordPerfect Users option. Then select the Welcome WordPerfect Users item. The WordPerfect Users Welcome Pack dialog box will appear on-screen. In it, you'll find four WordPerfect-specific Help tools. These tools include the following:

Ask The WordPerfect DOS Expert. This lets you ask the Expert a "How do I . . ." question or enter a WordPerfect 5.x for DOS keystroke or key combination. You'll then



see the steps for performing that action in Word Pro.

WordPerfect DOS Topic Help. This option lets you pick a WordPerfect 5.x for DOS Help topic and receive help for the same topic in Word Pro.

Ask The WordPerfect Win Expert. Here you may ask the Expert a "How do I . . ." question or enter a WordPerfect 6.x for Windows keystroke or key combination. You'll see the steps needed to perform that action or function in Word Pro.

WordPerfect Win Menu Help. This feature lets you pick a WordPerfect 6.x for Windows menu item and find out how to perform the same action in Word Pro.

The four options work similarly, outlining step-by-step the tasks you must complete to perform the requested functions in Word Pro. For example, if you click the first of the buttons in the Welcome box or select the Ask the WordPerfect DOS Expert on the drop-down Help menu, an Ask the Expert toolbar appears on your screen.

In the blank line, enter either a "How do I . . ." question—minus the "How do I"—or a keystroke command. To find out how to print, for example, type **print a document** or press the SHIFT and F7 keys simultaneously. And to find out how to center a headline, type **center text** or

press the SHIFT and F6 keys at the same time. Then click OK or press the ENTER key.

Word Pro will interpret your question and display its answer in another dialog box. If Word Pro's answer isn't quite what you were looking for, look at the topics displayed in the Expert's These Answers May Also Apply: area. If one of them better suits your question, select the topic and click OK. In addition, many Word Pro Help screens have a button at the bottom entitled See Related Topics. When you click this button, Word Pro displays a list of similar topics.

As with all of Word Pro's methods for providing help, the Help window remains on top until you close it. That way, you may refer to it repeatedly while performing a function. When you've finished using the Expert, click the Done button to close the window.

Adapting To Word Pro. Just like changing jobs, switching word processors can cause stress. While you'll probably adapt to some things without trouble, other transitions will prove more difficult. With the WordPerfect to Word Pro SwitchKit, learning a new word processor can go more smoothly. In fact, the kit will let you use your knowledge of WordPerfect as you become more comfortable, proficient, and efficient with Word Pro. And soon, you'll find that you won't need the SwitchKit anymore. ■

by L. Johnson

Quattro Pro 6.0

Working With Text



uilding a spreadsheet in Quattro Pro can be fun. Although spreadsheets are important financial tools, they don't always have to be boring rows and columns.

To make your data more interesting, you can change the look of the text. You can keep your spreadsheets understandable and make them more dynamic at the same. Use different fonts for the column labels, make the final row italics, or change an important row of data to bold. A little thought can go a long way.

1. Open the spreadsheet that needs a more creative design.
2. Select the cell you want to change. To select a cell, click it.
3. With the mouse pointer still in the highlighted cell, click the right mouse button. This opens a small menu.
4. Click the Block Properties option.
5. The next window that opens is titled Active Block and offers a list of options that change the format of the cell. Click Font.
6. The selections here include Typeface, Point Size, and Options. At the bottom right-hand corner of this window is a sample of the text from your highlighted cell. (Depending upon the size of the cell, you will see all or part of the data.)
7. Select a typeface by clicking it. The sample text will change so you can see what the typeface looks like. Then change the number of the point size, and the sample text also will change size. As you choose from the Options list, the text will continue to change.
8. When you are finished, click OK.

You also can change the typeface and point size with the options in the Property Band at the

top of the spreadsheet. The first option from the left side of the screen shows you the current typeface for the highlighted cell, and the second shows the point size. To make the text bold or italicized, the toolbar above the Property Band offers two buttons: B and I. Clicking these buttons turns the bold and italics on and off.

■ Changing The Layout. Now that you have the text looking sharp, let's move on to the layout. If you have columns that are wide because of the amount of data they hold, consider wrapping the text. This feature lets you type long entries and have the text wrap down to as many lines as needed. (Word processors use this feature so that you do not have to hit ENTER at the end of each line.) The wrap feature increases the height of the row to accommodate the size of the data.

1. Select the cell you want to wrap.
2. Right-click and select Block Properties.
3. Select Alignment from the options.
4. Click the box on the far right of the window to select Wrap Text. Then click OK.

The text is now wrapped around into more than one line. You may need to change the

width of the column so the data is easy to read and has more than one word on each line.

There are several other alignment options in the Block Properties window. These options are broken down into Horizontal and Vertical alignments and let you set the text to the left, right, center, top, or bottom of the cell.

Vertical alignment can be useful at times but should be used sparingly. When you align text vertically, it increases the size of the row by the number of letters in the text. This causes a big gap from the row above this text to the row below it. Vertical alignment works best when cells in other columns of the same row hold wrapped text.

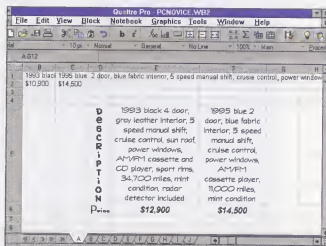
The example spreadsheet on this page shows the same data in two designs. Rows 1 and 2 are vertically aligned, it increases the size of the row by the number of letters in the text. This causes a big gap from the row above this text to the row below it. Vertical alignment works best when cells in other columns of the same row hold wrapped text.

more interesting.

Column D was narrowed to the width of the word "Price" (which has a small typeface), and columns E and F also were sized according to the amount of data in each column. Cell E5 had more text than F5 so it is wider, and they both were formatted to wrap and center. Cell D5 was aligned vertically, and cells E6 and F6 are centered with italics and bold, and the point size was increased to 12.

As these examples show, it only takes a little creativity to produce interesting additions to the annual financial reports or the weekly budget analysis. ■

by Ellen DePasquale



Be careful of the typeface you choose when using vertical alignment in Quattro Pro. As you can see, many script and handwriting typefaces won't work well with this type of alignment.

Quicken Deluxe 5.0

Printing Checks

5.0 FOR WIN



One of the most common excuses for not using *Quicken* is the hassle of double entry: first writing a check by hand and then typing the information into your computer. You can eliminate this time-consuming method of entry, though, by printing your checks through *Quicken*. You just enter the information into the program and then choose the Print command. *Quicken* even will address the checks, letting you save additional time if using window envelopes.

Besides saving time, printing checks in *Quicken* can make them look more professional, which is advantageous for small-business owners on a tight budget. *Quicken* checks are preprinted with your personal address and bank information, and you even can have a personal or company logo placed on the check. Nine different styles of checks are available. You can purchase single-sheet checks for use with inkjet or laser printers or continuous-feed checks for use with dot matrix printers.

The biggest drawback to *Quicken* checks is their cost—about \$40 for 250 checks. (Certain styles are more expensive.) By comparison, you can buy a similar number of checks for handwritten use through your bank or a private company for about \$20. You can order *Quicken* checks online through the Intuit Web site at <http://www.intuit.com>, through the *Quicken* program's Activities menu, or by dialing (800) 433-8810.

Setting Up. Prior to printing checks, you'll need to prepare your printer for use. Open the File menu and highlight Printer Setup. In the pop-up menu that appears, click the Check Printer Setup command. In the ensuing window, use the drop-down menus to choose the printer and the type of checks you're going to use.

You can choose the font and print size that will be used on the checks with the

Font button. The Align button is used to make adjustments (even as small as 1/100th of an inch increments) to the text positioning so it prints correctly on the check lines. Use the sample checks included with your software to properly set up the text alignment and click the Print Sample button to see if your adjustments worked. (NOTE: You also can use blank paper to print the sample checks; you'll just need to hold the blank paper and a sheet of checks back-to-back up to a light to determine whether the printed text is properly aligned.)

The Settings button lets you set print quality. You also can choose whether to use color. The Logo button will print a bit-mapped file (.BMP) saved on your hard drive onto your checks. In the Check Logo window, click the File button to choose a .BMP file to use.

Making Out The Checks. When entering transactions in the electronic checkbook register, type p (for Print) in the Num field, rather than a check number, to specify a transaction for printing. Open the File menu and select Print Checks to begin the printing process.

In the Select Checks To Print window, you can choose to print all specified checks, or you can print only checks written prior to a certain date. Be sure to choose the Check Style that matches your *Quicken* checks, or you'll ruin several checks. If you want to include your logo on the checks, mark the logo box in the Print window. Also be certain to type the check number you want to use in the First Check Number box; *Quicken* will print additional checks with incremental numbers.

After the checks print, *Quicken* will ask whether they printed correctly. If so, click OK. If one or more checks was printed incorrectly, type the number of the first ruined check in the box and click OK. *Quicken* then will leave Print in the Num field of the checkbook register for the checks that need re-printing. Checks that have printed correctly will have their check number replace Print in the Num field. The next time you choose the Print Checks command—after you've fixed the printing mistake—*Quicken* will attempt to print the checks correctly. ■

by Kyle Schurman

Troubleshooting Printing Problems

If you're experiencing any of the following problems when printing from *Quicken*, give these solutions a try.

Logo and date are cut off. If, after adjusting the check alignment, the problem persists, your printer may not be able to print high enough on the paper to print the date and logo. Ask Intuit about purchasing check pages with a blank first check.

Nothing prints. Try printing from another program to ensure the printer is working correctly. If it is, restart Windows, open *Quicken*,

and make sure all printer settings are correct. Disabling Print Manager may help, too.

Printed characters are garbled. You may have chosen a font *Quicken* can't use, the font size may be too large for the printed area, or you may be using the wrong printer driver.

Recipient address isn't printed. Make sure you've entered the recipient's address in *Quicken*. Be sure the Print Check option is specified in the Transaction Type field. ■

THE BEST CD-ROM VALUE IN AMERICA! ONLY \$4.99 EACH!

MINIMUM ORDER: 4 CD-ROMS

Over 36 quality titles to choose from!

Education
Entertainment * Games
* Special Interest
* Stories

These CD-ROMs sell elsewhere for \$19.95 - \$89.00 each

ACT NOW!
CALL IN YOUR ORDER
TOLL FREE TO 800-568-9467
9:30am-5:30pm EST. Dept. W.J.
or FAX YOUR ORDER TO
212-725-8062



BURGESS & NIXONS CAMPAIGN GAME PAK
57421
GM/WIN 3.1X



BOING BOING & ROGER'S LEARNING ADVENTURE
57403
ED/WIN 3.1/WIN '95/MAC



POWERSTICK II
57429
GM/ED MS/DOS



ULTIMATE BLACKJACK
57416
GM/MS/DOS



PUZZLE MANIA
57578
GM/WIN 3.1X



20,000 LEAGUES UNDER THE SEA
57400
ED/MS-DOS/WIN '95



PINOCCHIO
57622
ED/WIN 3.1/MAC



FUN SCHOOL 4 (AGES 5-7)
57468
ED/ET/MS-DOS

SPECIAL BONUS OFFER

BUY 8 CD-ROMS & GET 1 FREE!

CARDS & CASINO

57992
GM/WIN 3.1X/MS-DOS

ULTIMATE GIN

57437
GM/MS-DOS

QUANTUM GATE

57431
GM/WIN '95

TALKING SCHOOLHOUSE

57415
ED/WIN 3.1/MAC

INTERNET PASSPORT FOR WINDOWS

57448
REF/WIN '95

ULTIMATE GAMBLER

57506
GM/MS-DOS

HARDWOOD SOLITAIRE

57409
GM/WIN 3.1/WIN '95

GREAT GOLF CD

41752
REF/WIN 3.1

HOW TO BUY A USED CAR

57478
REF/WIN '95

WEBSTER'S ENCYCLOPEDIA

57509
REF/WIN 3.1X/WIN '95

DIGITAL DOWNS

57406
GM/WIN 3.1

KING ARTHUR'S MAGIC CASTLE

57410
GM/ED/WIN 3.1X/MS-DOS/MAC

SWISS FAMILY ROBINSON

57414
ED/WIN 3.1/MAC

CLICK ART SELECT

57564
REF/MS-DOS

3-D GARDEN DESIGNER

57447
REF/WIN 3.1X

OPERATION JUST BECAUSE

57428
GM/MS-DOS

REDWOOD GAMES

57568
GM/ED/MS-DOS

FUN SCHOOL 4 (UNDER 5 YRS.)

41452
ED/MS-DOS

COMPLETE INTERACTIVE WORLD FACT BOOK

412727
REF/MS-DOS

CAMPBELL'S SOUP TYPE FONTS

57442
SI/WIN 3.1X

3-D MANIA GAME PAK

37037
GM/WIN 3.1X

OZZIE'S HOUSE

57470
ED/WIN 3.1X

FUN SCHOOL 4 (AGES 5-7)

57468
ED/ET/MS-DOS

RX WORKS

57449
REF/WIN '95

SOLID GOLD TRUE TYPE FONTS

57450
SI/WIN 3.1/WIN '95

ULTIMATE POKER

57418
GM/MS-DOS

FOUR FOOTED FRIENDS

50145
ED/WIN 3.1X/WIN '95

FUN SCHOOL 4 (AGES 7-11)

57469
ED/ET/MS-DOS

WORLD ALMANAC

41222
REF/WIN 3.1X/MAC

COLLEGE FUNDING FINDER

57476
SI/REF/WIN 3.1/WIN '95

MINIMUM SYSTEM REQUIREMENTS FOR ALL DISCS - 386 DX OR HIGHER DOUBLE SPEED CD-ROM 4MB RAM, SVGA, SOUND CARD, MOUSE DOS 5.0, WINDOWS 3.1 OR HIGHER
CODE: GM-GAME ED-EDUCATION ET-ENTERTAINMENT REF-REFERENCE SI-SPECIAL INTEREST

NOT A CLUB! NO COMMITMENT TO BUY MORE!

KTI brings you a great new way to get exciting CD-ROMs at unbeatable prices. Just write in the numbers of the 4 (or 8, 12, 16, etc.) CD-ROMs you want for \$19.95 plus shipping and handling. Order 8 CD-ROMs for \$39.90 plus shipping and handling and receive one additional CD-ROM FREE of charge!

THE BEST CD-ROM VALUE IN AMERICA TAKE ADVANTAGE OF IT TODAY!

SEVEN GOOD REASONS TO BUY FROM KTI

1. Our titles are priced elsewhere for \$19.95 - \$89.95
2. Custom - designed front ends
3. User friendly installation instructions
4. All titles operate in real time
5. Technical support available for every program
6. Exclusivity - many KTI titles are not available anywhere else
7. 90% of programs playable from disc

FOR FASTER SERVICE USE YOUR CREDIT CARD AND CALL US

TOLL FREE 9:30 AM - 5:00 PM EST: 1-800-568-9467 DEPT. W.J.

FAX: 212-725-8062

KTI CD-ROMS FACTORY DIRECT

220 Fifth Ave.
New York City, NY 10001

YES, please send me the 4 (8, 12, 16 or more) CD-ROMs I have indicated -- at \$19.95 per set of four plus shipping and handling (\$3.00 per set of 4).

Send me these four (4) CD-ROMs for \$19.95 plus \$3.00 shipping and handling (total \$22.95).

Write in your selection numbers below

#

Please check how you are paying:

- ☐ My check is enclosed
☐ Charge my CD-ROMs to my:
☐ Master Card ☐ VISA ☐ AMEX ☐ Discover

Place additional titles on a separate sheet.

Account Number Exp. Date

Signature

Name Phone number ()

Address Apt.

City State Zip

Microsoft Excel 5.0

Using Financial Formulas

5.0 FOR WIN



SPREADSHEETS

s the new year approaches, you may decide to evaluate your budget and finances. Microsoft Excel contains excellent financial formulas you can use to perform useful calculations, such as projecting the future value of an investment or figuring monthly loan payments. You then can use these functions to help you analyze your upcoming financial decisions. This month, we'll show you how to properly set up two financial formulas that you can use for your finances.

■ Projecting An Investment's Worth.

You can use Excel's FV, or future value, formula to find out how much an investment will be worth in the future. Imagine, for example, that you want to save monthly to send your child to college or plan for retirement. In either case, it's handy to know how quickly your money will grow into a healthy nest egg. If you know the interest rate, number of payments, and amount of each payment, you can project how much money you'll have after a given amount of time.

However, in order for the FV formula to work, you need to put this information in the correct form. The correct structure for the FV function is $=FV(\text{interest rate, number of payments, amount of each payment})$. Notice that each of the variables in the argument portion of the formula (between the parentheses) is separated by commas. You'll also have to assume each of these components remains constant for the term.

Type $=fv()$ to begin the formula. Then enter the interest rate as the first component in the argument. It works best to enter interest rates as a percentage of the number one. For example, if you assume your money will grow at an average rate of 10% per year, enter .1 to

represent 10%. Furthermore, if you want to make monthly, rather than yearly, payments, you also should divide the interest by 12 (.1/12).

Next, you'll enter the total number of payments you plan to make. The period used to calculate interest must be the same as what you used for the interest rate. If you divided the interest rate by 12, you must multiply the number of payment years by 12. For example, if you're making monthly payments into a 20-year retirement account, enter 12*20. If you're making yearly payments, you simply enter the number of years.

averages 7.5% rather than 10%, you only will have \$83,060 ($=FV(.075/12,12*20,-150)$).

■ **Figuring Monthly Loan Payments.** Another useful formula is $=PMT$, which calculates monthly payments of principle and interest on a loan. You'll appreciate this formula the next time you want to figure monthly payments for a house or car. The structure is $=PMT(\text{interest rate, number of periods, principle})$. As in the FV formula, you must keep the amounts constant over the term and make sure to use the same units (month or year) for both the interest rate and payment period.

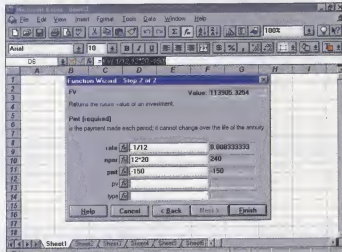
Let's assume you are buying a new home and want to figure the monthly payments. You're financing \$100,000 for 30 years at a 10% interest rate. Enter $=pmt(.1/12,30*12,100000)$ to show a monthly payment of -\$877.57. If you refinance at a lower interest rate of 8%, your monthly payment is -\$733.76 ($=PMT(.08/12,30*12,100000)$).

Finally, you can use Excel's Function Wizard as a tool to enter the financial formulas instead of typing them directly into a worksheet. Click the Function Wizard button (which has an F and X on it) on the Standard toolbar. In the dialog box, choose Financial from

the Function Category listing and FV or PMT as the Function Name. Choose Next and enter the variables, such as interest rate and number of payments, in the text boxes provided. When you've entered all the required variables, Excel displays the result of the formula in the Value box. You can click Finish to insert the formula into your worksheet, or you can change any variable to see the new result in the Value box.

Once you've mastered Excel's financial formulas, you can exercise your knowledge to keep your finances in shape for the next year and beyond. ■

by Linda Bird



In Microsoft Excel, you can use the Function Wizard to enter financial formulas instead of typing them in and to analyze the results.

Finally, you'll need to enter the payment amount. Enter this amount as a negative number since cash you pay out, such as deposits to savings, is represented as a negative number.

You can use the following example as a guide for using the FV function: Assume that you plan to deposit \$150/month in a retirement account that pays 10% annual interest. To calculate the value of your account in 20 years, enter $=fv(.1/12,12*20,-150)$. At the end of 20 years, you will have \$113,905. Once you've set up the formula, you can perform "what-if" analysis with it by changing the individual variables. For example, if the interest rate

Microsoft PowerPoint 7.0

Using AutoShapes

If you're not very artistic or you are simply in a hurry, you'll appreciate PowerPoint's AutoShapes when you want to quickly add drawn objects to a presentation. By using AutoShapes, you can easily insert professionally designed objects such as circles, rectangles, and arrows that spice up presentations or emphasize certain information. Once they're inserted, you can move, color, resize, or even add text to them. After you discover how easy it is to place AutoShapes into your presentation, you'll probably find it's quicker and more efficient to use them than drawing the same types of objects from scratch.

To use AutoShapes, left-click the AutoShapes button on the Drawing toolbar. You also can choose View, Toolbars; then select AutoShapes. Left-click OK in the Toolbars dialog box when finished. With either approach, the AutoShapes toolbar appears, giving you a variety of common shapes from which to choose. And even though the AutoShapes are graphically represented on the buttons, you can rest your mouse pointer over each to display an identifying ToolTip.

Left-click the AutoShape you want, then move the mouse pointer to where you want to place the shape on your slide. Left-click and drag the black cross pointer to draw the shape. To make an AutoShape perfectly symmetrical, press SHIFT while you draw the object. After you draw the object, the AutoShapes toolbar remains active so you have ready access to other shapes. When you're finished with the toolbar, left-click its Close button.

■ Modifying Shapes. Once AutoShapes are created, you can modify them in a number of ways, specifically by moving, resizing,

coloring, or deleting them. Before making these changes, however, you must first select the object. You can left-click to select a single shape; hold SHIFT while left-clicking AutoShape objects to select multiple ones. Once a shape is selected, white resizing handles surround the object. Any change you make applies to all objects selected. To deselect object(s), left-click outside them.

To change an AutoShape's size, move the mouse pointer over the handle on the side or corner you want to resize until a two-sided resizing arrow appears. Drag to resize the object. You also can move an AutoShape to another location on a slide. Select the shape, then display the white selection arrow by pointing to the middle of the shape. Drag to move the object.

You'll notice that some AutoShapes (such as the arrows) also have a diamond-shaped, yellow adjustment handle. Left-click and drag this handle to change an AutoShape into a related shape. For example, you can drag the adjustment handle of a left-pointing arrow to the right to change the proportion between the arrowhead and the rest of the arrow.

When you place an AutoShape on a slide, it appears with the pattern and color most recently used. To recolor it, select the AutoShape, then left-click the Fill Color button on the Drawing toolbar. Choose a color from

those displayed. If you want more choices, select Other Color to show the various colors available. You also can choose Patterns, Shading, or Textures to add those effects to the AutoShape.

You can change the shape's line color in a similar way. Select the AutoShape, then left-click the Line Color button on the Drawing toolbar. Choose from the colors displayed.

If you no longer want an AutoShape object, you can easily delete it. Just select the shape, then press DELETE.

■ Placing Text. A popular and effective use for AutoShapes is to emphasize information on a slide by inserting text on the shape.

To add text to an AutoShape, select the object, then begin typing. PowerPoint automatically centers the text within the object. If your text is short, such as a label, it will fit properly within the shape. If the text is long, however, it will extend beyond the borders of the AutoShape as you type.

You can make the text fit within the AutoShape in two ways. First, you can make the text wrap within the AutoShape at its current size. To do this, choose Format, Text Anchor; then check the Word-wrap Text In Object box. If you prefer, you can instead make the AutoShape change size to accommodate the text. Choose Format, Text Anchor, then choose Adjust Object Size To Fit Text. Notice that you can preview the effects of your choice by left-clicking the Preview button. When you're satisfied with the way text displays in an AutoShape, choose OK.

Once you've learned to work with AutoShapes, you'll find it's easy to embellish your presentation with them—and make your points in a winning way! ■

by Linda Bird



You can use AutoShapes to emphasize information in presentations.

Learn the Language Of The Web:

HTML, Part III



In the last of our lessons on the Hypertext Markup Language (HTML), you'll learn to create more "colloquial" World Wide Web pages that convey your fluency in Web communications. You'll integrate text with graphics, optimize graphics for easier downloading, and control text size and color. We'll explain how to include automated E-mail links to make it easier for surfers to contact you; then you'll add invisible comments on HTML pages to help you maintain the Web site. We'll even introduce you to the HTML table, a terrific tool for designing more sophisticated page layouts.

As with our previous lessons in the last two issues, to participate you'll need to use the Windows Notepad accessory to create the pages. (Users experienced with editing software may use their favorite Web editor instead.) To view the pages you create, you'll need a Web browser. We're using the popular Netscape Navigator. Finally, to practice with graphics, you'll need a Web image or two to play with. See last month's tutorial for instructions on copying graphics from the Web.

Text Wrap. Last month, you learned to set images into a Web page using the tag. If you did any experimenting on your own, you may have discovered that text following a graphic does not automatically flow or "wrap" around the image. Fortunately, it's simple to override that default situation with the ALIGN=LEFT and ALIGN=RIGHT commands. When inside the tag to achieve text wrapping. Furthermore, ALIGN=RIGHT will place the graphic on the right margin. For example,

```
<IMG ALIGN=RIGHT SRC="elvis.gif">
```

will place the image on the right-hand side and flow text around it on the left-hand side.

Now try it. Open Notepad, locate your WEBFILES directory, and open the file named Template.htm. Use the Save As command to start a new document named Tricks.htm.

Use the tag to place one of your graphics on the page. Copy or type in some dummy text for practice. Then use ALIGN=RIGHT to wrap text and set the image

on the right side of the page. To check your work, open the file with your browser. In Netscape, use the File menu's Open File command (File, Open File).

Sometimes, text may wrap too closely and crowd an image. Remedy this by adding a clear border around the picture. Use the horizontal space (HSPACE) or vertical space (VSPACE) commands within the IMG tag and set values by pixel width. (Pixels are tiny dots in the computer screen that contain color and brightness information.) Look closely at the following image tag:

```
<IMG ALIGN=LEFT HSPACE=10  
VSPACE=5 SRC="elvis.gif">
```

The HSPACE and VSPACE commands put a clear space around the image that's five pixels high and 10 pixels wide. There's no hard rule about spacing, here. Determine how much space you need around a given image by trial and error. (See Figure 1.)

Thumbnail Links. As anyone who surfs the Web knows, a major obstacle to smooth surfing is a page that takes minutes to download. To provide a comfortable ride on your page, keep images at 20 kilobytes (KB)—usually thumbnail size. But you still can provide larger pictures to power surfers.

Do it with thumbnail links. Use the external linking technique you learned in our first lesson to link a larger image to the small one. Here's an example to refresh your memory:

```
<AHREF="bigelvis.gif"><IMG  
SRC="elvis.gif"></A>
```

Try this with a pair of your own images. Viewed through a browser, the thumbnail image should have a thin blue border, indicating the picture is an active, clickable link. The most important thing to remember is this: Until you become familiar with the DOS file structure, keep all your graphics in the same WEBFILES directory. Otherwise, the browser won't know where to find them.

Tip: Don't limit yourself to linking pictures to pictures. Why not link a thumbnail portrait of yourself to your résumé?

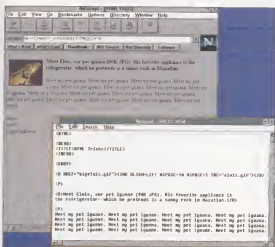


Figure 1. The above code lets you add a graphic and caption. If your Web page includes an image link, it helps Web surfers if you note its size in the caption.

Speedier Graphics. Another way to speed your page's download time is to include WIDTH and HEIGHT commands in the tag. Here's how the browser displays an image: When it encounters an image tag on an .HTM document, one of its tasks is to calculate the width and height of the picture. If the measurements are already included in the tag, the browser can display the picture sooner. Here's how to include width and height in an image tag:

```
<IMG WIDTH=50 HEIGHT=30  
SRC='elvis.gif'>
```

There are several ways to determine the pixel width and height of a picture. With Netscape, the easiest method is to open the image file. Just as you open an .HTM file in your WEBFILES directory, use the browser's File, Open File command to open a .GIF image. It will appear in a window by itself, and its width and height dimensions will appear in Arabic numerals on the window's title bar.

Of course, you also can use image processing programs such as *Adobe Photoshop* or *PaintShop Pro* to look up the height and width of your Web graphics.

Captions. Many Web browsers do not yet support commands for image captions, but by placing a paragraph tag and descriptive text immediately after a left- or right-aligned

image, you'll get the effect of a caption. Use the tag to make caption text bold.

If you include a link to a larger image in the caption, then people viewing your page can sensibly decide whether they want to click the link.

Here is an example of a picture—with a hotlink—accompanied by a caption:

```
<A HREF="bigelvis.jpg">  
<IMG ALIGN=LEFT HSPACE=10  
VSPACE=5 SRC="elvis.gif">  
</A>  
<P><B>Meet Elvis, our pet iguana  
(90K JPG). His favorite appliance is  
the refrigerator—which he pretends  
is a sunny rock in Mazatlán.</B>
```

If you want to *prevent* text from wrapping around an aligned image, use the <BR CLEAR=ALL> command, which instructs the browser to begin the next paragraph *below* an image.

Reformatting Text. Another way to make a Web page look engaging and personal is to alter character formatting. You've already learned the codes for creating bold and italic text, for instance.

But you can add more subtle differences to a Web page by altering font sizes. Every browser has a default "base font" size. The browser displays regular text at this size, and it uses this default to calculate, for example, how big a headline should be in relation to that base font. Web authors can take advantage of this by telling the browser to increase or decrease font size based on the default. Use the tags around the text you want to resize.

```
<FONT SIZE=+5>W</FONT>  
<FONT SIZE=+4>E</FONT>  
<FONT SIZE=+3>L</FONT>  
<FONT SIZE=+2>C</FONT>  
<FONT SIZE=+1>O</FONT>  
<FONT SIZE=-1>M</FONT>  
<FONT SIZE=-2>E</FONT>
```

Web pages full of wildly varying text are distracting, but this technique is handy for achieving large initial caps in headlines—such as you see on the Netscape home page. It's also good for highlighting important paragraphs

on your Web page. Try it now on your Tricks.htm Web page.

Achieve a different kind of text formatting with the <BLINK></BLINK> tags. They cause the enclosed text to flash on and off. While this effect is annoying in many instances, it may be a useful effect on certain pages—calling to attention some "fine print" that might ordinarily be overlooked.

You can change text colors, too. Last month, you learned how to color backgrounds by using special codes in the <BODY> tag; use a similar technique to color text. Namely, use **hexadecimal color codes** in the <BODY> tag to tell the browser which values of red, green, and blue to use for a particular element of HTML text.

You can change the text color (TEXT), link colors (LINK), and visited link colors (VLINK). Here is what a body tag may look like when the background and text have been colorized:

```
<BODY BGCOLOR="#FFFFF2"  
TEXT="#000099" LINK="#FF0000"  
VLINK="#FF00F">
```

As you can see in Figure 2, this Web page has a creamy white background, dark blue text, red links, and pink visited links. (See last month's tutorial for a list of Web sites that provide color information.)

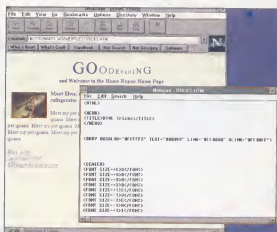


Figure 2. Lots of contrast on this page makes it easy to read. Note how manipulation of font sizes turned the "Good Evening" text into an eye-catching headline.

When using colored backgrounds and text, always use contrasting colors. For instance, yellow text on a white background is nearly impossible to read. As a rule, use dark text on light backgrounds and vice versa.

When coloring your Web pages, don't short-change the color-blind if you want to reach the

maximum audience. These folks most especially rely on contrasting hues to differentiate Web page text from background. Red words, for instance, on a green background would be nearly invisible to someone who is red-green color-blind.

■ **Good Communications.** A page with elegant text and graphics is nice, but having a sophisticated Web site is more than special effects. Ideally, you want the content of your page to excite people and encourage them to contact you—especially if you have dreams of a Web-based business. You want to know what your visitors think.

Your template already includes your E-mail address in the `<ADDRESS>` tags. But you can make it even easier for visitors to E-mail you with the MAILTO link command. When users click a MAILTO link, it activates their browsers' E-mail feature, which automatically includes your E-mail address as recipient and their address as sender. Users then can simply type a message and click the Send button. Here's how to include MAILTO on your pages:

```
<ADDRESS>
Updated by <A HREF=
"MAILTO:Mike@mikesplace.com">Mike
Jones<BR>
Mike@mikesplace.com</A><BR>
December 15, 1996
</ADDRESS>
```

Note the placement of quotation marks. See how it looks in Netscape in Figure 3.

Be careful. Novice Web surfers may have difficulty using your MAILTO link. Many users will first have to configure their own E-mail address, usually through a preferences or options menu. (In Netscape, go to Options, Mail and News Preferences, Identity.) Some users even may have to type in the address of an E-mail server to use MAILTO. In case people hit glitches, it's best to make your E-mail address visible—as we do in the example above. Then readers can use their regular E-mail software to contact you.

Especially if you're implementing intricate HTML tricks, it helps to write short notes to yourself in the HTML document—to remind you (or future site maintainers) of what you're doing. Authors often include general comments about the page within the `<HEAD>` tags, but you can place specific comments anywhere. The syntax looks

like this: `<!--comment-->`. You might include a comment like the following one in your page:

```
<!--Be sure to verify this URL weekly; it
changes frequently-->
```

Comment text is invisible to browsers, but people who view the source of the document will see it.

■ Dealing With Preformatted Text.

What if you want to present text in a special format—such as a poem, a chart, a recipe, or an equation? The simplest way to retain special text shapes is to use the `<PRE>` tag (for "preformatted") tags. Simply enclose the special text within the tags.

Often, however, the `<PRE>` tags are a poor solution. Browsers may not repro-

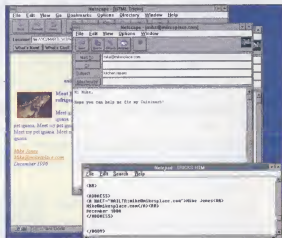


Figure 3. An E-mail link as it appears in the HTML code (bottom), as a link on your Web page (left), and in the E-mail feature of the Netscape browser.

duce the shape exactly, and you may have to adjust tab settings within Notepad (or your Web editor) to achieve perfect alignment. Charts with many columns are hard to reproduce, and furthermore, all text in the `<PRE>` tags appears in the monospaced Courier font.

■ **Trying Out Tables.** Especially for recreating different charts, the HTML `<TABLE>` tags are an excellent solution. Within the table tags, you'll typically use table row (`<TR>`) and table data tags (`<TD>`) to designate row or column headings. Here's a simple, three-row, three-column table used to show a course schedule:

```
<TABLE BORDER>
<TR>
<TH>Monday</TH><TH>Wednesday
</TH><TH>Friday</TH></TR><TR>
<TD>9am to 12pm</TD><TD>9am to
12pm</TD><TD>1pm to 4pm</TD></TR>
<TR>
<TD>Beginning<BR>Appliance repair
</TD><TD>Intermediate<BR>Appliance re-
pair</TD><TD>Advanced<BR>Appliance
Repair</TD></TR>
</TABLE>
```

Notice that all beginning tags have corresponding ending tags. The `BORDER` command inside the opening table tag places a thin line around each table cell. Always include a border when you begin building a table; it will help you spot errors in your coding. In addition, note that the table heading tags (`<TH>`) create bold, centered text. Table data cells (`<TD>`) contain plain text that aligns left.

Turn now to Notepad. Create a sample table in Tricks.htm. For starters, copy the table you see above. Then experiment with other elements. In the third row of our table, for instance, we included line break tags (`
`). You can use just about any HTML tag within a table, including paragraphs, lists, image, and link tags.

■ **What's Next?** A modern language like English changes incrementally. New words and phrases gradually gain acceptance, and old usages fade away. But the Hypertext Markup Language changes like teen-age slang—rapidly and a little quixotically. New HTML codes—as well as whole

new concepts—continue to assert themselves. It's easy for a novice to feel overwhelmed.

When you're ready for more lessons on HTML, point your browser to the Yahoo! search engine site and immerse yourself in its HTML-related treasure trove. The URL is:

http://www.yahoo.com/Computers_and_Internet/Internet/World_Wide_Web/

Fortunately, as you've learned with this series, communicating in HTML is so simple that even novices can pick it up quickly. So don't be shy. Upload your home page, surf in on fellow Web inhabitants, and study up to stay current with the latest HTML lingo. ■

by Marti Remington



Colors By Fuji (Of course.)

Hey, who turned on the color in the computer products aisle?
Fuji. Who else? Their 3.5" 2HD Formatted Rainbow
Packs are a brighter, more efficient way to organize your data.
And they're a lot more fun, too, of course.



Computer Products

Protect Your Investment With A Case For Your Portable



You recently dropped a couple grand on a portable computer and, in a short amount of time, you've become pretty dependent upon the machine. Your work materials, calendar, and address book all are stored away on its hard drive. It has become your constant companion.

Today, you have a business meeting to attend, so you head for the car. It's raining, so you tuck your computer under your arm like a football and make a run for it. Bad decision. Seconds later, you lose your footing and end up in a heap on the ground. You escape serious injury, but the computer ends up in a shallow puddle, cracked and inoperable. In a fraction of a second, all the work, planning, and money you've invested disappear.

It sounds harsh, but it happens everyday. Many normally intelligent people carry their expensive portable computers around unprotected, courting disaster. Remember that a computer is a delicate piece of machinery; with a little water, a little sand, and a short fall to the concrete, you have a useless hunk of plastic. And that's not much fun.

Protection Is Important. When you make a major purchase such as a portable computer, it only makes sense to spend a little money to protect that investment. You don't have to spend a fortune to get a quality case (although you certainly could). You just have to know what you're looking for.

First and foremost, a carrying case should do a good job of protecting your computer. That means quality, wear-resistant, and waterproof fabrics; sturdy zippers; strong and comfortable shoulder straps and handles; and most important of all, a good internal system to

absorb the shock a portable experiences when knocked off a desk, dropped from a car seat, or tossed from a moving train. We'll talk more about shock absorption in a minute.

Second, a good carrying case should fit your other needs, as well as your personality. Essentially, there are four types of portable carrying cases: the briefcase, which accommodates your computer and everything else; the system case, which simply holds your computer and a few accessories in a small, padded bag; the slip-cover case, which is a simple case with little or no padding to be used in conjunction with another bag; and the backpack, which is pretty self-explanatory.

Obviously, different people prefer different types of cases. For example, if you're a businessperson who takes the whole office on the road (including a computer, portable printer, cellular phone, files, pens, business cards, etc.), a briefcase-style bag is probably for you. Some businesspeople already have a briefcase, so they might use a slip-cover case and put the computer inside, or they might go with a small system case. Finally, a college student would probably rather have a backpack than any of the above.

Trying The Case. For this review, we examined each one of the four types of cases, gathering samples from a number of manufacturers. We should point out now that while we only examined one style of bag from each company, all the manufacturers included in this article carry a variety of different products.

We divided the cases up according to the manner in which they protect the computer inside. Apart from the Wetsuit 1.0, each case uses one of three methods for absorbing shock: foam padding, an elastic sling, or air.

The Foam. The most common shock absorber used in carrying cases is foam padding. Even the bags that use other methods often add some foam to the construction. We reviewed two cases that used foam as their main method of protecting a computer.

The first was a low-cost system case from Tenba. The C109 Note Pak System is a simple carrying case designed to hold your computer, power supply, and very little else. The product literature claims the case also can hold a portable printer as well, but that might be a bit of a stretch.

The sturdy Note Pak has a rugged, black polyester exterior and dense foam padding throughout. It also has a lightweight, built-in metal frame to protect the computer and maintain the case's shape. At \$60, the Note Pak is offered as one of Tenba's budget-priced bags. (It was the lowest-priced, fully padded case in our survey.) Therefore, details such as zippers and shoulder straps aren't quite as heavy duty as those on some of the more pricey bags, but they are adequate. Overall, the Note Pak is a good case for anybody looking for a no-frills way to safely transport their portable.

Targus is one of the largest computer carrying case manufacturers out there, and they offer many different types of bags. We got ahold of the Deluxe Universal—a case that is so big, the average businessperson could live out of it for several days. The company constructs the Deluxe out of Koskin, a durable material that feels a little like leather. The case has thick foam padding and adjustable cushioned dividers. You could easily carry an entire mobile office in here, and you'd still have room for a change of clothes.

However, this plush carrying case's size could actually be a problem for some people.

A fully loaded bag—with electronics, paperwork, and everything else—can be quite heavy, but the cushioned handle and shoulder strap help make the load more bearable. At about \$130, the Deluxe is not a cheap case, but it will definitely get the job done for anybody who needs an all-in-one bag.

The Sling. The next bag we tried out was the ThinkPad Back Pack from PORT, which employs the sling method of protecting the computer. In addition to plenty of foam padding, an elastic sling inside the case holds the computer. If the bag is dropped, the sling cradles the notebook and stops it from touching down, dissipating the shock.

PORT's backpack was a pleasure to test. Its padded straps and backing make it comfortable to wear, and the ballistic nylon shell and industrial-strength zippers are first-rate. And, if the need should arise, the sling comes out, so you can use the bag as a regular backpack.

The only problem we have with this \$109 bag is space. For the average person, there should be plenty, but students may find themselves running out of room after adding a few textbooks. Of course, after loading up even the lightest portable computer, most students won't feel like carrying around a library, so this case should appeal to the portable-toting college set.

The Air. The most unique case we reviewed was the AirPro Attache from CODi. The internal shock absorption system on this \$139 bag contains a series of air chambers. After inserting your portable computer into the internal compartment, you force air into the chambers using a built-in pump. Once the fit is snug and you've closed the top flap, you have one very safe computer.

CODi claims the AirPro system offers more shock absorption than other methods, and we believe it. It's simply a great idea. And the case that surrounds the AirPro compartment is pretty exceptional as well. The Attache, which is made of ballistic nylon, is a medium-sized bag that can accommodate your basic portable needs as well as a few other office essentials. Good zippers, plenty of extra padding, and a comfortable shoulder strap and handle make this bag one of our favorites.

Finally, we looked at the Wetsuit 1.0 from Kensington. Like a scuba-diving wetsuit on a person, this case slips snugly onto your notebook to protect it from the elements. Once you have the case on, you can leave it on. To operate the computer, you just unzip the case. Another zipper allows access to the ports and plug-ins located at the back.

The best thing about the Wetsuit is, because it never has to come off, it offers full-time protection. The neoprene protects the computer from the weather, spills, light bumps, and scratches. There's even a built-in screen guard to help protect your computer's extra-sensitive display. With its built-in handles, the Wetsuit makes handling your notebook much easier.

But it's not a full-fledged carrying case. To us, the best use for this \$30 product would be in conjunction with another carrying case. For example, you could strap the Wetsuit onto your portable and then carry the case in your regular briefcase, or even in another computer carrying case. The Wetsuit offers some protection while you use the machine and added protection when used with another case.

■ **Just Do It.** The most important thing to remember here is that you really must have a case. Yes, you spent a lot of money on the computer, and instead of using that as an excuse not to purchase a case, you should use it as a very good reason to buy one.

When you want to make sure your portable will survive the rough stuff, try one of the reviewed cases. We can happily say that all of the cases we tested could do the job for you. The key is to pick one that suits you, your needs, and your checkbook. And then just use it. Regardless of the quality of the bag, it can't protect a computer that's not inside it. ■

by Tom Mainelli



This case from PORT offers users the comfort of a backpack and the protection of a sling-and-foam-padding shock absorption system. We recommend removing the ThinkPad tag before using the case; thieves don't need to know this regular-looking backpack actually contains an expensive computer.

For More Information:

AirPro Attache 1005A
CODi Inc.
(800) 263-4462
(717) 540-1337
<http://www.codi-inc.com>

C109 Note Pak System, C416B Computer Traveler
Tenba Quality Cases Limited
(212) 966-1013
<http://www.tenba.com>

Deluxe Universal Case
Targus
(800) 390-4622
(714) 523-5429
<http://www.targus.com>

ThinkPad Back Pack
PORT Inc.
(800) 242-3133
(203) 852-1102
<http://www.portinc.com>

Wetsuit 1.0
Kensington
(800) 535-4242
(415) 572-2700
<http://www.kensington.com>



Get The Most 'Net For Your Dollar

Imagine that there were 3,000 cable TV providers nationally, all of whom might possibly be able to offer you cable access but none of them encumbered by local, state, or federal regulations. If you're contemplating getting connected to the Internet, your life is about to get more complicated than this example because there actually are thousands of different businesses able to offer you an Internet on-ramp. Internet service providers (ISPs) belong to a thriving and as yet unregulated industry.

Some of these companies are national providers of Internet services such as SpryNet or MindSpring; others are more familiar companies that have offered dial-up services for years, such as CompuServe and America Online. There are firms started in the past few years that operate locally or within certain regions and offer nothing but Internet access, while there are much older bulletin board systems (BBSes) that have started offering Internet services in addition to their dial-up services. Joining these ranks are other, bigger organizations that include major long-distance telephone companies such as AT&T, MCI, and Sprint and computer companies like IBM. Even cable TV companies are getting ready to enter the fray.

It's a wild and woolly free market out there in terms of Internet access, and *caveat emptor* ("buyer beware") are words to live by. There is no question that some providers offer better service than others, but you can only judge service and support quality after you get connected.

You can, however, determine which services will be the best value for you by comparing prices before you sign up. While it would be nice to be able to compare apples to apples when shopping for price, you may be lucky to be able to compare apples to oranges. ISPs charge for their services in different ways, and it pays to read the small print

before you make a commitment that goes beyond the mere money you spend. Switching between ISPs is not as simple as changing your long-distance telephone service provider, and it may require changes in software as well changes in E-mail addresses.

■ Comparing Apples To Apples.

There are several components of Internet service that may generate charges to you. Many companies charge a setup fee (also called a startup fee or initiation charge) that usually runs somewhere between \$10 and \$50. Often, ISPs charging a setup fee need that extra money to help cover their own infrastructure costs. These companies may be smaller, newer firms that are trying to grow but don't yet have all the inbound telephone lines and network equipment they need to support large numbers of subscribers. Before you invest in an account with one of these ISPs, you may want to check around to be sure the company will be able to provide you with a satisfactory level of service. If you're using a basic dial-up service where you use your own modem to connect to the service provider, you often will be able to find a provider who does not charge a setup fee.

Most Internet providers charge a monthly fee as well for access to their service. This fee generally includes a certain number of hours of "free" access. For example, a typical fee of about \$10/month might get you five hours of access. But some providers are starting to change this practice. For example, internetMCI offers users five free hours every month just for signing up, with no monthly fee. Prodigy offers a full Internet access service for a flat usage rate of \$1 per hour.

Many providers offer an "unlimited" access option, usually for a slightly higher monthly fee, that lets you connect to the Internet through

their service for as many hours each month as you want. Monthly rates can be as low as \$5 to \$10 with a few free hours included on up to \$20 to \$40 per month for unlimited service. If your service doesn't include unlimited access, you'll have to pay an hourly rate for any time you spend connected beyond the account limit. In general, rates range from \$1 to \$3 per hour.

■ **Special Features.** The Internet service business is a very competitive one now, and as a result, providers are trying hard to differentiate their products by offering special pricing programs as well as special features. Many ISPs offer toll-free 800 numbers for users who need to make long distance calls to reach the provider's point of presence, or telephone access point. However, expect to pay about \$6 an hour for that service.

An important feature to consider is exactly what kind of 'Net services your provider offers. For example, Prodigy offers two types of service; the first includes the Prodigy content services and access to the World Wide Web only, while the other is complete 'Net access, including E-mail, news, and any other Internet applications you want. Some providers still offer what are known as shell accounts, which are accounts on Unix computers that are connected to the 'Net. These accounts offer character-based Internet services and may not provide graphics-based services such as the World Wide Web (or may require additional software to do so).

E-mail is another important option to consider. Some services bundle an E-mail account into your Internet service while others require separate payments for each mailbox. Many ISPs also let subscribers publish their own Web pages, usually with a fairly generous allowance of disk space (10 megabytes is typical).

■ So, What Should You Be Paying?

A vital feature to look for is a free trial period, especially if you're unsure how much time you'll spend online. You can use the trial period to monitor your own access so you can better estimate what your future bills should be. This is important because if you run up 100 extra hours of online time one month and are paying an hourly rate of \$2.95, you'll have an extra \$295 to pay for that month.

On the other hand, if you spend 10 minutes every other day checking your E-mail, using only about two or three hours a month, a low basic rate plan that includes a few hours free



each month should be sufficient. You also could try one of the free E-mail services available. Two of the more popular ones are Juno (800/654-5866) and FreeMail (617/492-6600).

Value in an ISP, like any other service, is determined by more than price. While you should be able to find unlimited access services in the range of about \$20 to \$40 per month, you may be able to narrow down your options with other criteria. For example, 24-hour customer support is best but may be more than you need if you access the Internet only during business hours. Likewise,

complete Internet access is better than E-mail and Web-only access, but only if you need it.

Another variable to check is service availability. Try dialing into an ISP's access number during prime time and see how many tries it takes before a computer answers. Reliability is harder to measure, but you can ask friends and acquaintances for referrals. And while most providers make available some kind of software, they have different ways of delivering it. Some provide diskettes, while others require you to download it. Ease of installation of the software will also vary.

A final suggestion: If an ISP offers several different levels of service, it's usually a safe bet to take the one with unlimited access, especially if it's only \$10 to \$20 more per month. Here's an example: Let's say you sign up for a program that costs \$10 per month for five hours a month. If you have just two heavy-use months and pay for an extra 100 hours at \$2.50 an hour, it costs you an extra \$250, for an annual total of \$370. If you get unlimited service for \$30 per month, you pay only \$360 for the year, a savings of \$10. ■

by Pete Loshin

Who's The Cheapest?

Below is a list of popular Internet providers along with the amount of money they charge for Net access. Are you getting the best deal?

Provider	Phone Number	Web site	Monthly Charge	Hourly Charge	Notes
America Online	(800) 827-6364	www.aol.com	\$19.95 (includes 20 hrs/mo.)	\$2.95	15-hour free trial
CompuServe (Standard Plan)	(800) 848-8990	www.compuserve.com	\$9.95 (includes 5 hrs/mo.)	\$2.95	10 hours free first month
CompuServe (Super Value Plan)	(800) 848-8990	www.compuserve.com	\$24.95 (includes 20 hrs/ mo.)	\$1.95	10 hours free first month
Prodigy (Basic)	(800) 776-3449	www.prodigy.com	\$9.95 (includes 5 hrs/mo.)	\$2.95	20-hour free trial, Web and Prodigy content only
Prodigy (High Use)	(800) 776-3449	www.prodigy.com	\$29.95 (includes 30 hrs/mo.)	\$2.95	20-hour free trial, Web and Prodigy content only
Prodigy/Access Net Direct	(800) 221-9318	www.prodigy.com	No monthly charge	\$1	First hour free each month
TIAC (The Internet Access Company)	(617) 276-7200 (headquarters)	www.tiac.net	\$29 unlimited access	N/A	U.S. Northeast regional provider
InternetMCI (Preferential Service)	(800) 550-0927	www.internetmci.com	No monthly charge	\$2.50 each for hours over five	800 access available at \$5.95/hr.
InternetMCI (Unlimited Service)	(800) 550-0927	www.internetmci.com	\$19.95 unlimited access	N/A	800 access available at \$5.95/hr.
MindSpring (Light Plan)	(800) 719-4332	www.mindspring.com	\$6.95 (includes 5 hrs/mo.)	\$2	Startup fee of \$35 for all plans
MindSpring (Standard Plan)	(800) 719-4332	www.mindspring.com	\$14.95 (includes 20 hrs/mo.)	\$1	Startup fee of \$35 for all plans
MindSpring (Unlimited Plan)	(800) 719-4332	www.mindspring.com	\$19.95 unlimited access	N/A	Startup fee of \$35 for all plans
IBM Internet Connection (Basic Plan)	(800) 821-4612	www.ibm.net	\$4.95 (includes 3 hrs/mo.)	\$1.95	30-day unlimited free trial period; 800 access \$6/hr.
IBM Internet Connection (Unlimited Plan)	(800) 821-4612	www.ibm.net	\$19.95 unlimited access	N/A	30-day unlimited free trial period; 800 access \$6/hr.
Tri-Rivers Internet (Individual Plan)	(913) 826-2595	www.tri.net	\$12.50/mo. (includes 5 hrs/mo.)	\$1	(\$12.50 setup fee); 6- and 12-month prepaid discount options
Tri-Rivers Internet	(913) 826-2595	www.tri.net	\$25 unlimited access	N/A	(\$12.50 setup fee); 6- and 12-month prepaid discount options
PacificNet	(818) 717-9500	www.pacificnet.net	\$18.95 unlimited access	N/A	Southern Calif. provider; \$24.95 setup fee
SPRYNET (Economy Internet)	(206) 957-8997	www.spry.com	\$4.95 (includes 3 hrs/mo.)	\$1.95	a division of CompuServe
SPRYNET (Standard Internet)	(206) 957-8997	www.spry.com	\$9.95 (includes 7 hrs/mo.)	\$1.95	a division of CompuServe
SPRYNET (Unlimited Internet)	(206) 957-8997	www.spry.com	\$19.95 unlimited access	N/A	a division of CompuServe

Find It ONLINE

American Dietetic Association

<http://www.eatright.org>

Rarely is so much food eaten by so many people as during the holiday season. The information provided here by the American Dietetics Association will help you enjoy all the Christmas goodies without suffering from a nagging guilt or an aching stomach. This page is gorged with alimentary information, including answers to frequently asked questions, advice on balancing a healthy lifestyle, and links to other nutritious sites. After perusing this information, you'll be better prepared to handle the holiday feast.

Christmas In July

<http://www.socool.com/socool/archives/xmas.html>

The ho-ho-ho-ing never ends at this year-round Christmas celebration. When he's not counting down the days, hours, minutes, and seconds until Christmas, Santa will show you his hot Christmas links. Check out his Naughty-or-Nice list to find out how good you've been this year and laugh your way through irreverent versions of "The Night Before Christmas," including a politically correct version, a hip version, one for the Trekkies, and a version every computer nerd will appreciate. And after the holidays end, this site continues the festivities, and the countdown begins again.

Dr. Toy's Guide On The Internet

<http://www.drtoy.com>
Wondering what to give the youngsters on your list this



year? Dr. Toy presents an alphabetized list of the safest, most educational, and most entertaining games, gadgets, and gizmos available on toy store shelves. The toys the good doctor includes in her list range from high-tech electronics, such as a Talking Globe and a Big Screen Microscope, to the old favorites, such as Play-Doh and Face Painting kits. Each product reviewed includes the price and the phone number of the manufacturer.

The Gist

<http://www.theGIST.com>

As if television viewing wasn't enough of a passive activity already, The Gist comes along and eliminates the job of finding something to watch. The first time you register with the site, just type in your preferred viewing times, your favorite channels, your time zone, and the type of television shows you like the most. Then each time you return to The Gist, it will present a schedule of the shows that fit your criteria. This site also features news from the entertainment world.

History Of Santa Claus

<http://www.telepost.no/Santa/history.html>

Santa may be the most popular man in the world, but few people are aware of his biographical information. For one thing, Santa lives in Drobak, Norway. He keeps track of his list by writing on rolls of toilet paper the names and locations of all the good boys and girls. He even has his own post office. That's all we'll mention here; you'll have to visit this site to learn Santa's

other secrets.

The National Christmas Tree Association

<http://execpc.com/~ncta>

This site provides plenty of reasons to use a real Christmas tree this year. With tips on how to get a real Christmas tree looking its best, advice on ways to recycle a real Christmas tree, information about caring for a living tree, and lists of Christmas tree traditions and folklore, the National Christmas Tree Association will have your Christmas smelling like cedar, pine, cypress, or fir.

North Pole Enterprises

<http://www.rtis.com/roundtop/santa.htm>

Is There A Santa Claus?

<http://www-server.bcc.ac.uk/~zcapl61/santa.html>

The Night Before

Christmas Haiku

<http://gamma.is.tcu.edu/~savak/haiku.htm>

The Grinch Net

<http://lamar.colostate.edu/~ddave/grinchnet.html>

These sites spread the holiday cheer, although a few might be

unsettling to tykes who still believe in the bearded fat man. An interview with the jolly old elf addresses the rumor that Santa is moving the North Pole Enterprises to Round Top, Texas. SPY magazine does scientific research to answer the question Virginia popularized, "Is there a Santa Claus?" A little holiday haiku is always appropriate. And finally, when the Christmas blues are getting you down, head to The Grinch Net for some humbug.

Pass The Shareware Please

<http://www.frontiernet.net/~software>

Give the gift that keeps on giving this holiday season. Pass this URL to your friends and neighbors, and they'll be introduced to a different shareware product everyday. From the shareware title of the day to the expansive lists of games, plugins, tools, and utilities, you're sure to find something here that will tickle your fancy.

The Why Files

<http://whyfiles.news.wisc.edu>

The National Science Foundation proves there's no such thing as a bad question by providing answers to complex queries about sports, weather, war, nature, crime, and dozens of other topics guaranteed to pique your curiosity. The Why Files encourages an interest in science by showing how science relates to almost everything that happens around us. The vibrant interface will attract the attention of younger users, and the engaging information will keep the interest of adults. Even if you have no interest in science, this site demonstrates the educational potential of the Web. ■

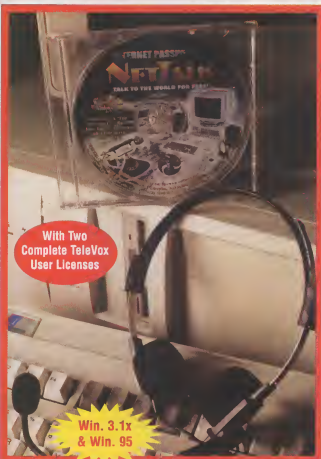
Compiled by Jeff Dodd

Talk To The World For FREE!

NETTALK

Only \$29.95

Give The Gift Of Free Long Distance Calls!



- Net Talk combines the technology of the Internet with the convenience of the telephone. This new technology allows a human voice to travel over the Internet in real-time.
- Now, you can talk to your friends and business acquaintances, person to person, right over the Internet! And, best of all, you will never again have to pay those exorbitant long distance fees!
- This kit contains all you need for connecting to the Internet (except a PC & modem). All you have to do is subscribe to the service provider included **FREE** in Net Talk, install the software, plug in the headset, and start talking with TeleVox Internet telephone users anywhere in the world! And it only takes 5 minutes!

Look At All The Great Software Programs & Resources You Get!

Netscape
Navigator
2.01/2.02



- Today's most popular Internet browser.



Internet Telephone &
Companion Phone

- Talk over the Internet with unprecedented clarity and fidelity.

Microsoft
Internet
Explorer



- A fully functional web browser that gives you what you need to safely surf the worldwide web!



On-Line
Communication
Services, Inc.

- A leading Internet Service Provider with years of network experience.



- A fully licensed version of the award winning electronic mail package.

MACROMEDIA
Backstage
designer



- The easiest way to create multimedia Web pages.

Includes • Headset • Microphone • CD-ROM With Six Programs

Minimum System Requirements

Net Talk allows users to speak to each other through their PC's with unprecedented robustness, clarity, and fidelity, even when using low-speed modems. Minimum system requirements are 486/66MHz PC (Pentium PC recommended), 8MB RAM, 2MB hard disk space (for TeleVox installation), 8-bit sound card (16-bit recommended), Internet Account, Window 3.1x or higher (Windows 95 compatible).

Send in this coupon
today or for faster service,
use your credit card
and call us toll free
9:30 a.m. - 5:00 p.m. EST:

1-800-568-9467 Dept. WJ
or Fax Your Order To
(212) 725-8062

NET TALK / Factory Direct

220 Fifth Ave. / 14th Floor
New York City, NY 10001

Yes, please send me _____ Net Talks at \$29.95
each, plus shipping and handling (\$5.00 per kit)
Please check how you are paying:

☐ My check is enclosed

☐ Charge my order to my ☐ Master Card ☐ Visa ☐ Amex ☐ Discover

Account Number _____ Exp. Date _____

Signature _____

Name _____ Phone # (____) _____

Address _____ Apt. # _____

City _____ State: _____ Zip _____

Changing The PC's Battery

Tick-tock goes the clock. Seemingly without fail, your computer kindly keeps time for you so you can mark files with the date and time, include the same information on your documents, and use programs such as daily schedulers. There's no question that having the correct date and time on your PC is critical, but how does it keep going when the power is turned off?

The date and time, and some additional information, are kept alive by a battery when the computer's power is off. (Specifically, they're contained in complimentary metal-oxide semiconductor random-access memory [CMOS RAM] that's powered by the battery.) That additional information includes all the basic configuration information that tells the computer what to do in the first stages of startup. This information is the truly important contents of CMOS RAM. If the battery goes dead, you lose the startup information, which could mean your system won't recognize its components, including the hard drive and/or the diskette drive. That means a crippled PC. It also means you'd better pay attention to your PC's battery. This is particularly true for older machines whose batteries tend to lose steam more often. Read on to find out how long your PC's battery should last, how to tell if it's dying, and what to do to replace it.

Most early systems (8088 through 286) used a cylinder of lithium batteries that totaled 3.6 volts of power. Alkaline batteries that provided a little more power (4.5 volts) were also available. These batteries generally reached their maximum life expectancy of around five years, though they sometimes went out sooner.

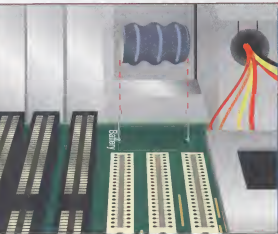


Figure 1. Cylindrical batteries plug into pins.

The newer lithium batteries last a little longer for a couple of reasons. First, the latest batteries are part of the new, lower-voltage technologies, which means they consume less power.

Second, the computer is no longer solely dependent upon the battery for its backup power. As long as the system is still plugged into the wall socket, the power supply can muster enough power that the system

users who replace their systems every five years) mean the instance of battery failure is much lower than it used to be. Batteries now can be expected to last seven to 10 years.

■ Signs Of Decline.

When your battery is feeling drained, it provides some signals that it's time for a replacement. The most telling sign is a little message from your basic input/output system (BIOS) that appears while you're going through the power-on self-test at

startup. (BIOS instructions control the startup functions. The POST test is the list of information that flashes across the screen as your computer is preparing itself to start up.) If your battery is weak, the BIOS will actually tell you that CMOS information has been lost. (The term "non-volatile RAM" may be used instead of CMOS.) In this case, the system reverts to the factory default settings, which means the loss of any changes you've made while adding hardware or adjusting the startup routines, and display an incorrect time and date. The hard drive may not function because the configuration information has been lost.

When any information has been lost or changed, the computer will recognize it and notify you so you can go in and make corrections. The computer has its own way of checking the integrity of the CMOS memory; it's a set of bytes, called checksum numbers, contained on your system. These are a total of all the bytes in the CMOS memory.

The system stores the checksum numbers on the hard drive and compares them to the CMOS total at startup. If the numbers don't match, the computer knows it has lost power

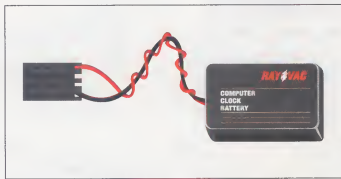


Figure 2. External battery packs like this one connect to the PC's motherboard by a pair of wires.

doesn't have to use the battery. The batteries help out only if there's a power failure or the PC is unplugged. These two innovations plus the high PC turnover rate (the number of

somewhere, been corrupted, or had another problem. It will notify you that CMOS is corrupted or the battery is dead and load up defaults that let you start the system. The default for the date and time will be wrong, but the computer probably will default to give you one hard drive and one diskette drive to work with, or whatever the original manufacturer settings dictate. If these items were added after the original purchase, you'll have to change the settings before you have access to any storage.

Your system might go through this routine several times before the battery goes completely dead, but you should replace the battery when you first suspect a problem. If the system loses default settings from CMOS, it's possible something else is wrong. But one clear sign that your battery is dead is the need to reset the setup settings every time you turn on the computer.

■ **Changing The Battery.** The first step when replacing the battery is to back up the CMOS contents. This is tricky if the battery has already gone down and erased your settings; it's a good idea to keep this information written down. The easiest way is to simply write down all of the BIOS settings by hand. Watch the POST process and look for a message that says, "Setup" and then lists a key. Press this key quickly to enter the system setup. Write down all of the setup values. For example, you can choose the monitor settings from CGA, EGA, VGA, SVGA, etc. Remember to write down any changes you make to these instructions, especially after any hardware installation.

The battery exchange will be an inside job, so it's best to consult your manual about the procedure before removing the PC's case. Look for the CMOS battery. It can be either a little barrel-shaped object, most often blue, about

From Our Readers...

Dear PC Novice,

I use an Epson 8088 computer, and it has been very reliable. Lately, some of the letters on the keyboard are sticking. Is there anything I can do to remedy this situation? Some of the letters are: E, R, T, S, and Spacebar. The letter R will not work at all.

The keyboard is Epson, model 0603A, code AB, Serial #01645B.

To my knowledge, a new 101-key keyboard could not be used with this computer due to the special keys on my Epson.

Andrew P. Lane/Windsor, CT

It sounds like your keyboard has one of two possible problems. You may have an accumulation of dust and dirt inside your keyboard. If this is the case, cleaning it thoroughly with a small brush or a small vacuum cleaner should take care of the sticky key problem. The other possibility is that the keyboard keys have shifted until they're pressing against the case. Look to see whether there is sufficient space around each key. If it looks like the case is squeezing your keys a little too tightly, take the case off by undoing the screws on the back of the case and very carefully removing it. Now, move the keys until the case fits the way it should. You won't have to move them much, just a little wiggle. Complete this process very carefully. It's not recommended while the system is still under warranty, but if you are mechanically minded, it's worth a try on a system this old.

Unless your system is an Equity I Plus or an Apex 100, you're right that the new 101-key keyboard won't be compatible with your system. You can try looking for another Epson 0603A keyboard through a used parts store.

Send questions about old computers to:

**Your Old PC
c/o PC Novice
P.O. Box 85380
Lincoln, NE 68501**

(Volume prohibits individual replies.)

1.5-inch long attached to the motherboard (Figure 1), or it will be a pack that connects to the motherboard by two wires (Figure 2). If

you see any evidence of corrosion on the battery (it will look like frost), check whether any battery acid has come in contact with the motherboard. If your system uses a battery pack, the acid can drip onto the board if the pack is positioned right over it. The acid also can run down the wires. If the motherboard has been subjected to acid, it

probably has to be replaced. Because the motherboard holds the CPU, the bus system, and all of your computer's basic hardware needs, motherboards can't realistically be repaired.

If the battery is soldered to the motherboard, you should install an external battery pack, which typically connects to a plug located near the original battery. You'll also need to move a motherboard jumper to enable the external battery. (For details on jumper settings, refer to the manual.) Remember to turn off and unplug the PC before attempting to replace the battery. Also be sure to touch the computer's case to discharge static electricity that could damage the motherboard.

Another common type of battery looks like a large watch battery (Figure 3). This type of

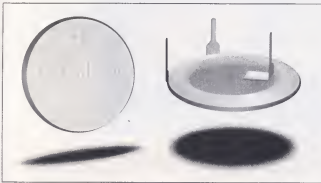


Figure 3: Prongs hold watch-style batteries in place.

battery is usually held in place by a prong (and sometimes by more than one). These prongs should easily slide off the battery and leave the piece free for removal. Just pop in the replacement battery and replace the prongs.

Once the new battery is in place and secure, replace the cover and turn on the PC. Enter the CMOS setup and check its contents against your hard copy, then correct any discrepant information.

■ **Battery Maintenance.** Be careful when installing hardware on your system. You might touch your screwdriver to the top of the battery. This will drain all the information that it was trying to save.

After a system is a couple of years old, the battery should be inspected for physical problems, such as corrosion or leaking battery acid. If it is near or on the motherboard, the battery should be checked once a month. At any sign of decay, replace the battery. At

three years, the battery is best replaced as a precaution.

Although the incidence of battery failure is much lower than it used to be, you can save yourself some frustration by doing a little maintenance before repair is really needed. It's much better to keep that clock ticking than to wake up to a problem when the alarm goes off. ■

by Elizabeth Panska

Upgrading RAM On A 386

One way to give your 386 a little power boost is to upgrade with additional random-access memory (RAM). How does RAM increase your computer's speed? It's like your computer's workbench. The CPU pulls all the files it needs for a particular program from storage and keeps them close at hand in RAM. Quick and convenient access to files speeds up your computer's performance. The more files the CPU can keep handy (in other words, the more RAM you have), the faster its response time will be.

RAM comes on **modules**, which look like small expansion boards. These modules, located near your CPU on the motherboard, may be nonremovable. The nonremovable modules are soldered into the board, but there should be some additional sockets to accommodate extra memory modules. Once the sockets and slots are full of compatible memory modules, you've reached the capacity for RAM. Most 386s can support no more than 32 megabytes (MB) of RAM; your system won't recognize any further attempts at an upgrade.

Shopping for a RAM upgrade can be a little tricky because there are so many different options out there. While there are industry standards for memory modules, there are enough variables to make shopping for RAM a little more complicated than purchasing stereo component. Consider the following factors when purchasing RAM:

1. The size of the module. RAM comes on a single, in-line memory module (SIMM). The SIMMs come in two sizes. A 30-pin SIMM is about 3.5 inches long and usually contains eight or nine chips. The 72-pin SIMMs are approximately 4 inches long and are easily recognized by the break between the connectors on each side. A new module won't fit in your system unless it's the right size. Some systems use modules that are neither size. These are called **proprietary modules**, and you'll have to call your specific computer manufacturer to get them. Proprietary modules are fairly rare and probably won't present a problem.

2. Your system socket configuration. Typically, in a system that is using 30-pin technology, you'll have eight memory sockets—two banks, four sockets in each bank. In a bank, you must have modules of the same capacity. For example, if you have 1MB modules, they all *have* to be 1MB.

The 386 system using 72-pin technology comes with four

sockets, and you don't have to worry about banks. You can add memory in any configuration. Most systems will take 1MB and 4MB modules; a lot of them won't take 2MB and 8MB modules.

3. Parity vs. nonparity. **Parity** is a type of memory security system that utilizes an extra bit to check the integrity of data, but not all systems are equipped with this safety net. You can sometimes distinguish the parity from nonparity SIMMs by counting the number of chips on the module. On 30-pin SIMMs, parity will have two or eight chips, and nonparity will have three or nine. Kingston Technologies, a leading RAM manufacturer, recommends that you call an expert on the 72-pin SIMMs to help you decide on the right upgrade.

There are a lot of specifications that just make a small difference in quality. An example is deciding between tin vs. gold leads. You can put gold leads into a tin socket or vice versa, but remember that like metals conduct better than unlike metals. If your system has tin sockets, buy a SIMM with tin leads even though gold would otherwise be the better conductor.

If you put in the wrong SIMM, you won't damage your system. It just won't work. Typically, when memory doesn't work, it won't turn on at all, or it may start up and produce a weird memory or parity error.

■ **When in Doubt, Ask!** The best advice when looking to upgrade RAM is to take your system manual with you so you can compare all of the specifications at the store. The next option is to call the original manufacturer and have them advise you. If neither of these is a viable option, you can call a memory manufacturer, such as Kingston Technologies or PNY Electronics, and give them as much information as you have available. □

Kingston Technologies
(800) 337-8410
(714) 435-2600

PNY Electronics
(800) 234-4597
(201) 438-6300

NEWPOINT. SURGE PROTECTION

UNBEATABLE PROTECTION RUNS IN OUR FAMILY!!!



- 360 Joule Rating
- Lifetime Warranty
- \$10,000 Equipment Guarantee

For over a decade, Newpoint's complete line of surge protection products have stood for high performance and solid reliability. Our dedication to superior quality has enabled us to design and manufacture a wide range of surge protection products that meet a wide range of user requirements.

Adding to our already extensive line of products and pricing, we are proud to introduce the newest member of our family: The HomeOFFICE Power Director®, the convenient desktop power controller and surge protector specifically designed for the needs of the small office and home office environment. Innovative, application-specific solutions from Newpoint. We keep it in the family!



- 450 Joule Rating
- Lifetime Warranty
- \$15,000 Computer Guarantee



- 900 Joule Rating
- Lifetime Warranty
- \$25,000 Computer Guarantee

NEWPOINT®

Newpoint
a division of Fiskars Inc.
6370 Nancy Ridge Drive
San Diego, CA 92121
(619) 677-5700



- 1350 Joule Rating
- Lifetime Warranty
- \$50,000 Computer Guarantee



The #1 "Must Have" Computer Accessory!

COMPUTER CITY

COMPUSA
THE COMPUTER SUPERSTORE

EGGHEAD

BEST BUY

MARK

Office DEPOT®

MICRO CENTER

How To Safely Move Your PC



You've probably heard the old saying: It's not really a move until something gets broken.

Well, let's hope, for your sake, that the moving experience does not include the crashing of your hard drive or the cracking of a monitor. It really doesn't take a computer engineer to figure out that dropping a hard drive from a distance of more than a few inches will send your personal finance spreadsheets into that vast nowhere land of lost information. It's like dropping a wallet with \$2,000 in it off the Golden Gate bridge. You know it's down there, but there's a slim chance you'll ever get it back.

So it really is no wonder that you're a bit apprehensive as the mover lifts that oversized PC box over his head as he maneuvers around the coffee table. It's pretty clear that there isn't much you can do to protect your computer if it takes a dive from that distance. But with a little thought, time, planning, and plenty of padding, you can cut your risk to a level you can live with and

maybe help your computer survive the bump, should it happen.

■ Before You Start Packing. There are some initial steps to take, and some maneuvers to avoid, right away when you're planning to move your system.

It's important to back up the information on your hard drive to diskettes. If you still have the installation diskettes for your operating system and other applications, you would simply need to back up the data files you've added to your computer. If you don't have those diskettes anymore, it will be necessary to create a full backup of both the data and system files. What you use to back up your system will depend upon the type of operating system you choose. Most come with a backup utility. For example, DOS 6.0 and newer contains MSBACKUP, which gives users a choice of three different types of backups: Full (which includes all files), Incremental (which includes only the files that have changed since the last backup), and Differential (which backs up only those parts

of the files that have been changed).

If you have more information on your hard drive than can fit on a few diskettes, a faster backup option, and one that's more expensive, is a tape backup system, which would require the purchase of a tape drive and the software package to run it.

While 10 or 20 megabyte (MB) hard drives are becoming increasingly rare, there are still some of these machines still in use. If you own an older PC, you must remember to park the read/write heads of your hard drive before you begin moving your system. There was once a time when moving your computer, even slightly across the top of a desk, when it was powered up could cause severe drive problems. If the read/write head was recording data, there was a chance the head would skip, causing you to lose data. If the read/write head crashed while you were moving the PC, you could lose the entire drive. That's why users with systems more than 6 or 7 years old must remember to engage the

PARK command before moving their system even the slightest inch. To accomplish this, type park at the C> prompt and press ENTER before you turn off the system. If you own a newer system, you don't have to worry about this because it will automatically park the heads for you.

Gene Ziemba, a technical support engineer with Hewlett-Packard, says that older systems required more maintenance before moving them because the systems were once made with the engineer in mind. Computers today are made with the consumer in mind.

"Everything was very technically oriented rather than for the average Joe consumer," Ziemba says. "With the older computers, it was left up to the user to do all the things like parking the heads. Now, they know it is a better idea to park the heads for the consumer."

Before you prepare your system for packing, you must make sure the computer is shut down properly, and the power is off.

Powering off from the DOS > prompt, or making sure you've gone through the proper exit process in any Windows application, could save you a little heart-ache later on.

According to Ziemba, properly powering off the system may be the most important aspect of your move.

"I think the biggest thing to keep in mind is that you should shut down the machine gracefully," he says, "especially when you're working with Windows."

Ziemba says that if you don't shut Windows 3.1 down properly, the temporary files that were created when Windows was running will build up and consume precious hard drive space. When you move, you can lose these files.

A logical next step would be to remove and label the computer's cables (or peripherals) and ports. One example of this procedure is to label the printer cable "P," while labeling the computer printer port where the cable was removed from "P" as well. Scotch-taping small pieces of paper with the letters or numbers on them to the cables and the ports seems to be an effective way to do the labeling. Scotch tape doesn't leave a sticky residue and makes for easy cleanup when it's removed at the end of the move.

While you may know everything there is to know about computer cables and PC installation, it's always a good idea to label everything just for the sake of convenience. This also would be an effective practice if your computer sits in a tight confined area that allows little room for installation, has poor lighting, or gives a restricted view of the back of your PC. In any of those cases, the labeling may come in quite handy and could keep you from breaking a connection.

Unhooking and packing the cables and peripherals is critical, but it isn't necessary to remove anything from inside the system. Circuit cards and expansion boards will transport just fine right where they are inside the system.

■ **The Move.** It may go without saying, but it's wise to use the boxes that the computer originally came in when moving the system. But many people don't keep these boxes, so if yours are now being used by the neighbor kids as a playhouse or soaking up oil in the garage, follow this rule of thumb: Find boxes that provide a comfortable fit for your components (meaning there should be no more than 3 or 4 inches of space on each side of the components). Moving a computer without placing it in a proper box can create obvious problems. A monitor, just as fragile as a television set, could crack or suffer damage if exposed

sure to wrap the component with plastic to keep the system clean. Pack around the component, creating room for very little movement, and tape the boxes firmly with heavy-duty packaging tape.

If you need immediate access to your system after the move, try to set it up where minimal movement will be necessary. Make sure the furniture and components are in the approximate spots that you would like them to be. This will not only save you time but can save some confusion related to reconnected cables.

During the move, the computer may have been subject to extreme hot or cold temperatures. This is not a problem unless the computer is started when either temperature extreme is affecting the system at the time. For example, if the system was transported in the back of a pickup truck while being exposed to subfreezing temperature, it's recommended that the system be allowed time to

made now are more durable than systems engineered 10 years ago, that doesn't mean respect and care can be tossed aside. Use common sense when transporting these machines.

■ **Reconnecting The System.** Making sure that all the connections are firmly in place is the key element to getting your system back in working order. Do not force connections of cables into ports. The connections should be made as smoothly as the disconnections were. Rather than risking a broken cable by pushing a connection that doesn't feel right, take a closer look at the connection, making sure both the port and the cable prongs are intact and free of debris.

Giving your computer space to breathe and making sure the system is on a clean, flat surface are important final steps in reconnecting the PC. You can run through a final checklist and refer to your

Crumpled newspaper is the handiest packing material available, while Styrofoam packing popcorn is also quite effective. If the packing popcorn is used, be sure to wrap the component with plastic to keep the system clean.

to harsh sunlight for prolonged periods of time.

Crumpled newspaper is the handiest packing material available, while Styrofoam packing popcorn is also quite effective. If the packing popcorn is used, be

assume room temperature before it's started again. Allowing time can prevent breakage inside, and outside, of your system.

One thing that's important to remember during the move is that even though computers

computer manual or call your manufacturer's technical support desk if you have any system problems after you have reached your destination. ■

by Mike Friend



Need help with your hardware or software?

Looking for simple explanations on technical subjects?

Send us your questions!

DOS

DOS COMPUTING

Q: At the school where I work, we provide computer files for students to work on certain assignments. We keep the original copies of the files in hidden directories and copy them to a working directory for the students. If they change anything, I'd like to be able to find it and copy the original version of the file from the hidden directory, so when the next student boots the machine, he starts fresh. Is there any way I can find and replace the changed file with the original unchanged ones and also delete any new directories/files that aren't in the original directory?

A: If not for the possibility you mentioned that a student might create a directory/folder there, you could have neatly done what you need with a mix of DOS' DEL and REPLACE commands. But these commands wouldn't get rid of any directories. The easiest way to do this is to use DELTREE to completely remove the student's working directory and any new directories that exist within it. To do this, type `deltree c:\student` (if the directory was named STUDENT). Then just rebuild/recopy what's supposed to be there from your master hidden directory by typing the following at the C> prompt:

```
copy c:\hidden\*. * c:\student\*. */s/e
```

Incidentally, you could do the same thing (delete and replace the whole directory) from the Windows File Manager. Remember not to get hung up on trying to find out what was changed: Just wipe out the whole thing and rebuild it.



WINDOWS 3.1

Q: A while ago, I saw someone working in Program Manager, and I thought I saw a neat trick that made all their program group icons "pop up" into visibility from where they'd been "hiding" beneath the open program groups. Is this a standard Windows feature or just my distorted wishful thinking?

A: You weren't hallucinating. Just go into Program Manager, click once anywhere inside an open

program group, hold down CTRL, and press TAB. All underlying program group icons will, as you say, pop to the surface. To make them disappear again, click anywhere inside an underlying but-still-visible program group.



Start

WINDOWS 95

Q: I recently installed 32 megabytes (MB) of random-access memory (RAM) after getting "Out of memory" messages (I'd been running with 8MB) but didn't get the speed increase I expected and that everyone suggested I should expect. Can you tell me what's wrong?

A: There are a lot of reasons a computer runs more slowly than expected. A surprisingly common one is that you've unknowingly pressed your turbo switch and your computer's running at, say, 16 megahertz (MHz) instead of 66MHz.

A more subtle, offbeat reason, which could be your problem, relates to what may have happened when you first installed Win95 on your 8MB machine. Win95 decided that 8MB wasn't a great deal of memory, but it noticed that you had plenty of hard drive space so it set up some disk virtual memory, which is disk space set up to act as if it is extra RAM.

For the sake of discussion (these numbers are hypothetical), let's say Win95 set up 32MB of virtual memory for you for a total of 40MB. Win95 then believed that was what you had. After you added more RAM, it's sometimes possible that Win95 "remembers" that you had virtual memory active, and it counts it, in a way, as being real memory. So now, Win95 might think that you have, say, as much as 64MB of RAM—and in a way, it's sort of right. So that itself isn't a serious problem.

The problem can come if Win95 adjusts its disk-cache size because it does that based upon the amount of memory it thinks you have, perhaps allocating one-third of all your memory for disk caching. You see, disk caching uses real RAM, and Win95 may be allocating, say, 21MB of your real RAM to this process. This is far too much, leaving you still short of RAM with, say, only 9MB of real RAM available to programs. The solution? Try editing your System.ini or Registry, adding or changing a line to read "MaxFileCache=4096" to limit your disk cache to 4MB.



UTILITIES

Q: Does making a full backup of data—which can take hours—still make sense these days? Most of my programs install from CD-ROMs, which are more permanent and error-free than a backup tape. If I just back up my data files, couldn't I get by with only the quick partial "differential" backups?

UTILITIES (cont.)



A: It's great to do extra backups of your data files. And though we're great fans of the "differential" backup option between full backup dates, we still recommend a relatively recent full backup for these reasons:

1. The differential backup option only works if you've first done a full backup; you see, differential is designed to back up only those files added or changed since your last full backup.
2. One problem with your approach is that it doesn't deal with what we call "hidden system configuration information." What we mean is that often when you adjust a program (such as set a default margin, customize colors, adjust the modem to work correctly, etc.), that adjustment information is stored somewhere in a tiny file (often a file ending with .INI, .CFG, etc.). Unless you have an encyclopedic knowledge of what all those little files are and where they're kept, you'll probably miss them if you only back up what you think is important.
3. Restoring from a full backup is much faster than re-installing from CD-ROMs because each program is already set up and ready to go on the backup. Re-installing Windows and all your software from CD-ROM easily could take a full day, and more if any configuration puzzles surface. Restoring from a full backup usually takes less than an hour.
4. What about all those updates, drivers, and maintenance releases you've put on in the last two years? Do you still know where that updated video driver or printer driver diskette is? Most likely, it's not on the CD-ROM. Do you know, for example, where the diskette you got last year for the ZorchWriter 8.08 is—the diskette that finally fixed all the problems you were having with that product? Do you remember how you installed it? No? See what we mean?
5. Finally, a full backup can be used to "fix" configuration problems that the original CD-ROMs can't. For example, if you've accidentally messed up the settings in *Microsoft Word for Windows* or the file corrupted, often re-installing from CD-ROM just accepts the bad settings that are still in the directory. On the other hand, if you have a complete backup of the WORD directory from days ago when it was working fine, restoring from that often fixes the problem without you ever having to even figure out what the problem was.

performance of a microprocessor? And would connecting it to the diskette drive's electrical power line affect the diskette drive?

A: These fans aren't really necessary on most computers (especially if the CPU isn't a Pentium), unless the computer came with one. However, Cyrix 6x86 CPUs and faster Pentiums probably do need cooling fans and often come with them. The cheaper fans often make a sort of annoying whining noise and can be unreliable. A fan that's failed is worse than no fan at all because the nonworking one actually will impede the cooling. CPU fans are cheap and easy to put in, and the little power they draw won't hurt your diskette drive or anything else. In some cases, they can extend the life or improve the reliability of the computer. PC Power & Cooling (800/722-6555, 619/931-5700) make arguably the highest-quality cooling fans in the computer business.

Q: I recently upgraded to a 486 VLB motherboard with an AMD DX2-80 Chip. However, I still have my older 16-bit ISA video card, and it doesn't seem to be keeping up. In Win95, it drops cursors and boxes and switches colors. Just to be sure the problem was the card, I tried a newer 53-type VLB clone card I borrowed, and it works fine. Is there a way to change the CMOS setting to get the card to behave?

A: Most often, older video cards are upset with BIOS shadowing of the video BIOS. BIOS shadowing is a feature where the code inside the slow read-only memory (ROM) chips on the video card is moved into the faster RAM on the motherboard. The idea behind this is to improve video performance. This feature can be found in the CMOS Setup routine under the Chipset or Advanced settings. The VGA video BIOS will be in the memory segment area called C000-C7FF. Your BIOS may list this area by the name Video BIOS or by area C000-C7FF. Whatever the name, disable this video BIOS shadowing. You'll lose little or no speed, and it could fix your problem. You also could try turning off any other shadowing settings you find in the Setup routine.

Two other things you can try are (a) finding the latest video driver for Win95, and (b) ordering a BIOS upgrade for your video board. Keep in mind that you probably can pick up a new VLB card for about \$45 (less, if used), and it would be radically faster, and a better match for your system, than your old card.

COMPUTER HARDWARE



Q: In a local department store, I recently discovered the existence of a small cooling fan that clips to the top of a computer's microprocessor. It costs less than \$13 and is supposed to cool the CPU, making it perform more reliably and live longer. It accepts the electrical plug from one of the computer's diskette drives. Would you recommend one of these fans as an enhancement to life-span and/or



ONLINE COMMUNICATIONS

Q: One feature I really like about CompuServe (compared to my direct Internet provider) is that I can request a receipt for E-mail I send. Then, when the other CIS member gets it, I get a little E-mail receipt and know it's actually been picked up. But I send so many messages that sometimes I can't remember if I've requested a receipt or not, so I



ONLINE COMMUNICATIONS (cont.)

don't know whether not getting one back means the person didn't get the message or that I didn't request a receipt. How do I know, on CIS, if I requested a receipt or not?

A: Find the copy of the original message (probably in Autofiled in your CompuServe Information Manager's filing cabinet). On the top left-hand corner, there's a box with grayed out letters that says Receipt. If this area has a gray X in the box, you know you requested a receipt.

WORD PROCESSING

Q: *I have an investment in style sheets that I've made for my AmiPro word processor. If I upgrade to Word Pro (the new name for the current version of AmiPro), will these be converted to SmartMasters (which Word Pro uses instead of style sheets)? If not, can I manually convert them?*

A: Yes, you can convert them, and Word Pro lets you do so one at a time or as a batch. Some survive the conversion process better than others, but most do fairly well. If you have some really important ones that you can't risk having slightly botched in the conversion, do this first: Before installing Word Pro, open a new file using the particular style sheet and save it as an AmiPro document file. Since Word Pro can read any old AmiPro files you have, you can (after the Word Pro install) open the old AmiPro document with your favorite style in it, then save it as a new SmartMaster.

MISCELLANEOUS SOFTWARE

Q: *I noticed that my Quicken for Windows keeps a directory called BACKUP on my hard drive in which it keeps five consecutively older copies of my Quicken data files (QDATA1, QDATA2, etc.). These occupy 5MB of the limited space on my 200MB hard drive. Since I routinely make backups of my entire hard drive onto tape and also run daily Quicken's backup-to-diskette option, these extra copies seem a bit like overkill in terms of backups. I occasionally manually delete these files, but Quicken seems to put them back on no obvious schedule. Why does it do this, and how can I prevent it?*

A: We agree that if you're making backups outside your computer, they are far better than the backups Quicken makes inside your computer. If your hard drive failed or your computer was stolen, you'd lose the backups in Quicken's BACKUP directory along with the originals at the very time you most needed them. Far too many users, however, either keep no backups outside the computer, can't find them when they need them, make them too infrequently, or never check to see whether their external backup

is good. So we're sure that there have been occasions when a Quicken technical support person has saved someone's financial cookies by using one of those five backups you don't need. That's why Quicken puts them there.

If you want to stop the program from making backups, edit the file in your WINDOWS directory called Quicken.ini. In it, you'll find a line reading "AutoCopy=5." You can change that to any number, and that's then the number of backups Quicken will keep. If you set it, say, to one, be sure to manually delete backups two through five one last time. Incidentally, you'll also find a line saying something like "AutoBackup=3." What that does is set the number of times you can exit Quicken without it nagging you and reminding you that you haven't backed up to diskette lately.

PRINTERS

Q: *I have a used HP-4 laser printer; I like it, but it lacks front panel controls for setting things such as the default font that my DOS programs will use. It came with software that is supposed to control the settings easier than the front panels used to, but the control software won't work on my computer. I've been told it has something to do with my computer not having a bidirectional printer port.*

A: There is a trend away from front panel controls. And on Hewlett-Packard printers, as well as on many others, the software replacing the panel does require a bidirectional parallel port, meaning the printer plug and your printer cable must be a type that can receive status information from the printer as well as send data to the printer. If you're lucky, all you need is a new printer cable that's certified as "bidirectional." Look on the cable's box and see if it says "bidirectional" or "IEEE-1284 compliant."

There are some computers (like the ones connected to a printer through a printer-sharing box or network) where it's impossible to ever get printer control software to "see" the printer and work. In that case, consider a \$50 utility program called Sizelf (Succinct Systems, 800/639-3711, 802/649-5144). This product can control your printer's settings, including its default settings, without a bidirectional printer plug. It also allows older programs (which don't have the control of fonts that Windows programs do) that normally print in the Courier font to print in any of the elegant internal printer fonts, even proportional fonts that normally would throw off the alignment of columns in reports. ■

Get straight answers to your technical questions. Ask PC Novice! Send your questions, along with a phone and/or fax number so we can call you if necessary, to: PC Novice Q&A, P.O. Box 85380, Lincoln, NE 68501. Please include all version numbers for all software about which you're inquiring, operating system information, and any relevant information about your system. (Volume prohibits individual replies.)



Kid Friendly Computer Accessories Designed in Fun Colors

Why can't kids have computer accessories too? For the family, the children's need to use a computer is a major motivating factor in purchasing a PC. Kids need a PC for doing homework, and to explore new learning activities.

Kids also need a place to store and protect their CD ROMs and disks. Why mix up their stuff with mom and dad's or worse with little brother Timmy? At SRW, we recognize the little needs of kids and have designed their

accessories in fun, distinct colors and have even created fun animal stickers to add personality to each disk storage item. What can be more fun?

Kids Smart™ accessories are

- "Kid Friendly"—easy to open and close, safe, and rugged
- Separates children's software from parents and siblings software using fun colors
- Teaches responsibility by storing and protecting their own disks and CD ROMs
- A natural complement to the PC purchase and purchase of "Kidware" software.

KIDS SMART™

SRW®

SRW Computer Components Co., Inc.
(800) 547-7766 • 1402 Morgan Circle, Tustin, CA 92680

ELECTRIC AVE.
Montgomery Ward

**ELECTRIC AVE.
& MORE**

MICRO CENTER

ELEK-TEK
The Computer Wonderland

And Other Computer Retailers Nationwide

SP
boutique

ACTION



EDITOR

When Ralph Nader can't be reached, bring your computer service problems to our Action Editor column. This page will help you find products, resolve service problems, and keep manufacturers alert to the critical issue of customer relations.

Are you having trouble finding a product or getting adequate service from a manufacturer? If so, we want to help solve your problem. Send us a description of the product you're seeking or the problem you've had with customer service. In billing disputes, include relevant information (such as account numbers or screen name for online services) and photocopies of checks. Include your phone number in case we need to contact you. Letters may be edited for length and clarity; volume prohibits individual reply. Write to:

Action Editor
P.O. Box 85380
Lincoln, NE 68501-5380
or
Send E-mail to 74644.3017@compuserve.com
or
Fax us at (402) 479-2104

Dear Action Editor: (copy of letter sent to Compaq)

I write to seek either reversal of, or reimbursement for, \$30 in charges incurred on my telephone bill by your 900 support number. I believe I am entitled to this because my Compaq Presario, sold with a scanner/keyboard, was shipped without the device drivers needed to operate the scanner.

The first few times I tried the scanner, it did not work, but I thought that was simply because I failed to properly follow the instructions.

The sad reality is that I should not have felt reluctant to call Compaq the very first time the computer would not work as advertised, but frankly I was deterred by your unconscionable policy of charging either \$35 on your 800 help line or \$2 per minute on your 900 help line.

When I spoke with your telephone technician, he was most helpful. After extended discussion, he determined the drivers needed to run the scanner/keyboard were not preloaded as they should have been. He has shipped me a Quick Restore diskette and compact disc, along with a second diskette. I've already spent several hours trying to get my Compaq to function as advertised. Now I must spend hours backing up my files (I'm told they are wiped out by Quick Restore) and then re-installing my programs.

To expect me to pay an additional \$30 in telephone "Helpline" charges is the quintessential example of adding insult to injury. I believe I have made a compelling case for either a reversal of my \$30 telephone expense, or if that cannot be accomplished, then for a refund check.

Frank R. Fioramonti
New York, NY

Action Editor chose to publish this letter because we've heard about a lot of confusion surrounding Compaq's system of charging for telephone support. We contacted a Compaq representative to get an explanation of their charges. Here's what we found out:

Callers to (900) 733-HELP are charged \$2 per minute, with a maximum charge of \$30 per incident. At (800) 652-6672, there is a diagnosis period when technicians try to determine the nature of the problem. If they determine the problem is not due to a defective

product, a flat fee of \$35 is applied. The Compaq representative told us a recorded message informs callers to the 900 number that if they think they have a defective product, they should call the 800 number. When we called the 900 number, however, we didn't hear the message. When we asked a technician whether any particular kinds of calls should go to the 900 or 800 number, she said she couldn't recommend which number to call. On our second call, another technician said the 900 and 800 numbers put you in touch with the same people; the 900 number simply gets you quicker service.

The Compaq representative said the company would reverse the charges given to Frank. But the rep pointed out this is not usual procedure, saying Frank should have called the 800 number to begin with.

.....

Dear Action Editor:

Let me tell you some "good stuff."

I was on the Internet and visited the Starfish site. I currently use their SideKick program, which I think is great. I went to the site to download a tryout of their other product, Dashboard. I received an error message saying the address was incorrect. They have an E-mail address posted so I sent a message telling them of the problem.

This was a Sunday night; on Monday, I received an E-mail message from Paul Martinez of Starfish asking me to try again. I was very surprised that they even acknowledged me! I tried again and still had the same problem. So I sent another message and told Paul it was still not working. That day, I received two messages from Paul, the first telling me he would contact the Web master and then a second telling me they did indeed find the problem and that it was now fixed. Paul then told me to go ahead and try Dashboard, and if I liked it, to please contact him because he wanted to send me a complimentary copy!

I was truly surprised and happy to deal with a gentleman like Paul and a company like Starfish!

Ellie Walsh
North Blenheim, NY



Article Index

List Of Articles By Month

January 1996

Article	Page
Using Arrow Keys To Check Commands In DOS	16
Navigating With Your Mouse In Windows 95	17
Basic Training	
(Checking memory, undelete, adjusting time and date, checking file attributes)	18
Drawing On Inspiration (art programs)	21
Beyond Computer Literacy:	
Ten Technologies You Should Understand	26
What's Wrong With . . . MS Word For Windows	32
What's New With OS/2	36
Computer Secrets Every Novice Should Know!	40
RAM: The PC's Memory Middleman	45
Putting Pictures In Your PC	50
Jack Of All Tasks (multifunction devices)	52
Becoming A Pro With Word Pro: Part I	59
PassageWay Links Computers & Telephones	59
Microsoft Excel 5.0: Creating Expense Reports	60
PageMaker 5.0: Creating Basic Flyers	61
Quicken Deluxe 5.0: Customizing Quicken	62
Lotus 1-2-3 4.0 For DOS:	
Relative & Absolute Cell References	63
Quattro Pro 6.0: Importing & Exporting Files	64
Microsoft Word 6.0: Importing Print Shop Graphics	65
WordPerfect 6.0/6.1:	
Working With Multiple Documents	66
How To Install RAM	68
Fake RAM: Does It Fulfill Real RAM Promises?	71
Definitions 101 For Portable PC Users	75
Local BBSes Give Down-home News	76
Find It Online	78
Cutting Through The Runaround (technical support)	80

February 1996

Tips For Windows 95: Getting Started	16
Making The Right Toolbar For The Job	19
Computer Communication: Serial Ports	
Let Your PC Talk To Its Peripherals	20
Basic Training	
(Printing files, adding a program group/menu folder, adding a program item/shortcut)	22
Boost Windows 95 With PowerToys	24
What's Wrong With . . . WordPerfect	28
Disks: Your Portable Data Suitcase	30
The Bits & Bytes Of Computing	32
Using Quicken: A Day-by-day Diary	34
Look Into Your Money's Future	
With Mortgage & Loan Programs	38
Software For The Couch Potato	40
Quicken: The Quick Fix For Your Finances	42
Quicken's Associates	47
Becoming A Pro With Word Pro: Part II	49
PageMaker 5.0: Creating Multiple-page Flyers	54
Microsoft Word 6.0: Generating Mailing Labels	55
Microsoft Excel 5.0: Introduction To Formulas	56
Quicken Deluxe 5.0:	
Scheduling Recurring Payments	58

Article

Lotus 1-2-3 5.0:	
Linking Data To Geographic Maps	59
Of Mice & Pens: Installing Input Devices	60
Using Ansysys	64
Notebook Computers: Data On The Go	68
Managing Your Money With A Modem	70
Maximum Return:	
Track Your Investments With A PC	74
Find It Online	79
Deciphering Hard Drive Jargon	80

March 1996

MSBACKUP Prevents Data Disasters	15
Juggling Windows	17
Basic Training	
(Naming files, changing drives, changing directories, freeing memory)	18
MS Business Pack Offers	
Ready-made Documents	20
Ward Off Infections Under Windows 95	21
Inoculate Your System Against Viruses	23
Cybercinema (movies and computers)	26
Name That Tone (computer sound)	32
A Look At Hard Drives	36
Input Innovations	40
How Much Computer Do You Really Need?	43
Become A Pro With Word Pro: Part III	50
Unhappy New Year (year 2000 problem)	54
Lotus 1-2-3 5.0: Resizing Columns & Rows	56
PageMaker 5.0: Producing Simple Graphics	57
Microsoft Word 6.0:	
Customizing Documents With Sections	58
Microsoft Excel 5.0:	
Using Formulas In Expense Reports	59
Quattro Pro 6.0: Protecting Spreadsheets	
With Data Security Features	60
WordPerfect 6.1: Working With TextArt	61
Quicken Deluxe 5.0:	
Managing A Household Budget	62
Upgrading Your Flash BIOS For Plug And Play	65
Having It Your Way Using DOS Batch Files	68
New PC Cards Keep Portables Connected	72
Java Buzz Flows Through Web World	75
A Map To The Internet	78
Find It Online	80
Let's Go Internet	81

April 1996

Managing Files In The DOS Directory	14
Basic Training	
(Backing up files and changing your desktop's appearance)	16
Photoediting Software:	
How Do The Packages Differ?	18
Understanding Graphics Accelerator Cards	24
Embedding Graphics In Documents	28
Demystifying The Magic Of PC Video	30
Choosing A Graphics File Format	34
Turn Your PC Into A Photo Lab	36
Networking Your Home PCs	40
Creating Simple Printer-sharing Schemes	43

Article

Page

Scanners Turn Documents Into Digital Data	46
Introducing PageMaker 6.0	
For Windows 95: Part I	49
Organizing Your Graphics	53
Microsoft Excel 5.0: Using Borders & Patterns	57
Quicken Deluxe 5.0: Recording Transactions	58
Word Pro 96: Creating Headers & Footers	59
Quattro Pro 6.0: Creating Your Own Macros	60
Microsoft Word 6.0:	
Creating A Data Source For Mail Merges	61
WordPerfect 6.1:	
Creating & Using HyperText Links	62
Lotus 1-2-3 5.0:	
Backsolving Simplifies What-if Analysis	63
Improve Your Image (video settings)	64
Cleaning Disks With FORMAT	68
Upgrading Your Portable's Hard Drive	72
Racing To The 'Net	74
Olympic Torch Burns Online	78
Find It Online	80
Downloading And Viewing Images	81

May 1996

CTRL-ALT-DEL:	
It's Not Just For Reboots Anymore	15
Adding Fonts To Windows Applications	16
Dealing With DLLs	18
Customizing OS/2 Warp's LaunchPad	19
Basic Training	
(Basic information, adding sounds to system events, editing system files)	20
Putting On A Different 'Face (unusual fonts)	22
From Point Size To PostScript:	
The World Of Fonts	25
Getting Started With Desktop Design	31
Three Projects Using MS Publisher	
For Windows 95	36
Desktop Publishing:	
It's Easy, But It Still Takes A Brain	40
Printing With Specialty Papers	44
PageMaker For Windows 95: Part II	48
Electronic Signatures Put The Cap On Pens	52
Microsoft Word 6.0:	
Creating Custom Dictionaries	55
Quattro Pro 6.0: Creating Your First Graph	56
WordPerfect 6.1: Expanding Abbreviated Text	57
Lotus 1-2-3 5.0: Gallery Styles	58
Quicken Deluxe 5.0: Financial Planning Tools	59
Word Pro 96: Using Bookmarks	60
Microsoft Excel 5.0: List Management	61
Installing A Touch Screen	62
Bigger Is Better (Portable PC market update)	65
Publishing Without Paper	68
Who Owns The Information?	73
Find It Online	75
Buying And Selling Old Computers	76
Fine-tuning Your CD-ROM Drive's Performance	78

June 1996

Deciphering DOS Error Messages	14
Installing & Configuring Windows 3.1	18
Basic Training (installing operating systems)	20
Utilities Patch Windows 95 Faults	23
Improve PC Productivity Without Spending A Dime	28
Getting The Most Out Of Technical Support	38
What To Do When PCs Won't Start	41
Personalizing Your PC	44
Making The Link	
Between Telephones And Computers	48

Article	Page	Article	Page	Article	Page
PageMaker 6.0 For Windows 95: Part III	52	ISDN Speeds Online Access	48	How The 'Net Works	38
Creating Small-office Intranets	56	Technology Boot Camps	50	Families Go Online	40
WordPerfect 6.1: Saving Time With Tab Settings	60	Making Your Point With PowerPoint, Part I	52	Tips For Buying & Using High-speed Modems	44
Lotus 1-2-3 5.0: Setting Worksheet Defaults	61	Word Pro 96: Using Find & Replace	56	Making Your Point With PowerPoint, Part III	48
Microsoft Word 6.0		Microsoft Excel 5.0		Serve Yourself (Web servers)	52
Calculating Formulas In Expense Reports	62	Using Sheet & Workbook Autotemplates	57	Microsoft Excel 5.0: Basic Printing Tools	56
Word Pro 96: Creating An Index	63	Microsoft Word 6.0: AutoCorrect & AutoText	58	Lotus 1-2-3 For Windows 5.0	
Microsoft Excel 5.0: Function Wizard	64	WordPerfect For DOS 6.0: Text Styles, Part II	59	Protecting & Hiding Data	57
Quattro Pro 6.0: Creating Slide Shows	65	Quattro Pro 6.0: Increasing Efficiency With Experts	60	Word Pro 96:	
Quicken Deluxe 5.0: Online Banking	66	PageMaker 5.0: Scaling & Cropping Graphics	61	Comparing Documents	
So, You Want To Be A Programmer?	69	Quicken Deluxe 5.0: Managing Multiple Accounts	62	With Team/Consolidate	58
Turning A Notebook Into A Multimedia System	71	Lotus 1-2-3 For DOS 4.0: Looping Macros	63	Microsoft Word 7.0:	
Tie In To The 'Net	75	How To Build A PC, Part II	64	Getting Started With Internet Assistant	59
Find It Online	79	Hard Copies On The Road	70	WordPerfect For Windows 6.1:	
Kicking Your CPU Up A Notch	80	Finding Flaws Through The 'Net	74	Adding Watermarks To Documents	60
Keyboard Tips & Tricks	82	The Hangups Of Videophones	78	Quicken Deluxe 5.0: Tracking Investment News	62

July 1996

DEFRAG Fixes Hard Drive Clutter	14
Working With Windows 3.1 Program Groups	16
Making Windows 95 Easier On Your Eyes	17
Taking Screen Captures In OS/2 Warp	18
Basic Training	
(Utilities included with operating systems, changing keyboard settings, sizing and moving windows)	20
Get Your Fax Straight: PC As Fax Machine	23
Overboard With Options (system add-ons)	28
System Setup	31
COM Ports: How To Tell Which Is Being Used	34
5 Things That Make You Go Wow!	36
An Inside Look At Anatomy Software	42
Be Two Places At Once With Remote Computing	45
Auditing Accounting Software	48
Microsoft Excel 5.0: Using Templates, Part I	52
Quattro Pro 6.0: Customizing Notebook Settings	53
Quicken Deluxe 5.0: Using The Deluxe Gateway	54
WordPerfect For DOS 6.0: Text Styles, Part I	55
PageMaker 5.0: Control Palette	56
Microsoft Word 6.0:	
Merging Form Letters & Data Sources	57
Word Pro 96: Drawing Tools	58
How To Build A PC	61
Intel's MMX Boosts Multimedia	66
Quality Portables Reach A Practical Price	68
PDAs: Personal Digital Assistants	
Or Powerless Desktop Aspires?	70
Wireless Computing Increases	
The Price Of Freedom	73
'Net Boxes Start To Emerge	76
Find It Online	80
Joining Forces With A Computer User Group	81
You Can Take It With You (portable peripherals)	83

August 1996

Config.sys Commands For Your Keyboard	14
Managing Temp Files	15
Basic Training	16
(Installing a printer and printing)	
Relational Databases	
Organize Complex Information	18
The Latest Color Inkjets Make A Splash	22
3-D Comes To Our Senses	26
Recordable CDs Make The Cut	30
Creating And Printing Documents	
In Foreign Languages	34
Printing Out Of-the-ordinary Projects	36
Creating Your Own Business Forms	39
How To Print Envelopes	42

ISDN Speeds Online Access	48
Technology Boot Camps	50
Making Your Point With PowerPoint, Part I	52
Word Pro 96: Using Find & Replace	56
Microsoft Excel 5.0	
Using Sheet & Workbook Autotemplates	57
Microsoft Word 6.0: AutoCorrect & AutoText	58
WordPerfect For DOS 6.0: Text Styles, Part II	59
Quattro Pro 6.0: Increasing Efficiency With Experts	60
PageMaker 5.0: Scaling & Cropping Graphics	61
Quicken Deluxe 5.0: Managing Multiple Accounts	62
Lotus 1-2-3 For DOS 4.0: Looping Macros	63
How To Build A PC, Part II	64
Hard Copies On The Road	70
Finding Flaws Through The 'Net	74
The Hangups Of Videophones	78
Find It Online	80
Is Your Image Safe With Dot Matrix?	81
Behind The Wheel Of Device Drivers	83

September 1996

DOS' Internal And External Commands	12
Getting Organized With Windows Cardfile	13
Windows 95's Dual-boot Option	14
Sneak A Peek At Merlin	16
Basic Training (installing hardware)	18
Flowcharting Software	
Offers The Power To Explain	20
Storage: It's Not Just Your Hard Drive Anymore	24
Campaigning On The Internet	31
Why Good Hard Drives Go Bad—Or Do They?	33
DSVD Modems Let Your Voice Be Heard!	36
Banking Online: How Safe Is Your Money?	38
Presentation Software:	
From Boardrooms To Web Pages	41
Widening Your Route To The Internet	44
Upgrading From MS Works To MS Office	46
Making Your Point With PowerPoint, Part II	50
Microsoft Word 6.0: Formatting Basics	54
Quattro Pro 6.0: @DATE Functions	55
PageMaker 5.0: Setting Paragraph Specifications	56
Word Pro 96: Versioning	58
Microsoft Excel 5.0: Locating & Replacing Data	59
Lotus 1-2-3 For Windows 5.0: Adding Graphics	60
WordPerfect For Windows 6.1:	
Inserting Sound Clips	62
Quicken Deluxe 5.0: Managing Investments Online	63
The Config.sys File: What Does It Do?	64
Ruggedized Portables Go Where Others	
Fear To Compute	69
Will Multiplayer Games	
Make A Net Killing Online?	72
Internet Video: Will It Muscle Into Prime Time?	76
Find It Online	78
Upgrading To Multimedia	80
On And Off With Ease	82

October 1996

Finding Hidden System Files	16
Desktop Fine-tuning In Windows 3.1	17
Windows 95 And The PPP Connection	18
Basic Training	
(Checking drives for errors or defects, starting programs automatically at startup, adjusting mouse settings)	20
Creating Web Pages The Easy Way (HTML editors)	22
Browsing For A Web Browser	26
Tools You Need To Create A Web Page	32
Internet 101: A Guide To Understanding 'Net Speak	34

How The 'Net Works	38
Families Go Online	40
Tips For Buying & Using High-speed Modems	44
Making Your Point With PowerPoint, Part III	48
Serve Yourself (Web servers)	52
Microsoft Excel 5.0: Basic Printing Tools	56
Lotus 1-2-3 For Windows 5.0	
Protecting & Hiding Data	57
Word Pro 96:	
Comparing Documents	
With Team/Consolidate	58
Microsoft Word 7.0:	
Getting Started With Internet Assistant	59
WordPerfect For Windows 6.1:	
Adding Watermarks To Documents	60
Quicken Deluxe 5.0: Tracking Investment News	62
PageMaker 6.0: Using The PageBars Add-on	63
Learn The Language Of The Web: HTML, Part I	64
Docking Stations: A Place To Put Your Notebook	68
Making The Best Use Of The 'Net	70
'Net Threats	74
Internet Search Services Show The Way	77
Internet Relay Chat Offers	
Worldwide Conversations	80
Find It Online	83
Taking An 8088 Online	84
A Profile Of The Internet And Online Services	88

November 1996

Using The DOS TYPE Command	15
Finding Missing Files In DOS	16
Customizing File Manager	18
Creating File Associations In Windows 3.x	20
Adding Notes To Windows 95 Help Files	21
Going Online With OS/2 Warp	22
Basic Training	
(virus protection and recovering deleted files and directories)	24
First Aid Utilities Can Fix Your Ailing PC	26
Technological Advances In Technical Support	33
Making Contact:	
Reaching Tech Support Is Half The Battle	38
All Aboard The New Bus	42
What You Should Know	
When Buying A New PC	44
Chipping At The Pentium Mystique	50
Where To Buy?	54
Equipping The Home Office	58
How To Buy Spreadsheets	60
Word Pro 96: Working With Tabs	62
Quattro Pro 6.0: Sizing Rows & Columns	63
Quicken Deluxe 5.0:	
Balancing The Checkbook Register	64
Microsoft Excel 5.0: Using Page Setup	66
Lotus 1-2-3 4.0 For DOS:	
Enhancing Graph Displays	67
PageMaker 6.0: Using Keystroke Shortcuts	68
Microsoft PowerPoint 7.0: Using Outline View	69
Microsoft Word 7.0:	
Creating Web Pages	
With Internet Word Assistant	70
WordPerfect 5.1 For DOS: Graphics Options	71
Learn The Language Of The Web: HTML, Part II	72
Hands Off:	
Protecting Portable Computers From Thieves	76
News On The 'Net	79
Find It Online	84
Extra Trunk Space For The 386	86
The Art Of Uploading & Downloading	89

Article	Page	Article	Page	Article	Page
December 1996		TSRs: Multitasking The DOS Way.....	48	Quattro Pro 6.0: Working With Text.....	67
Using The PATH Command.....	13	Your Guide To The Holiday Consumer PCs.....	50	Quicken Deluxe 5.0: Printing Checks.....	68
Installing Device Drivers In Windows.....	14	Choosing Between Business & Family PCs.....	55	Microsoft Excel 5.0: Using Financial Formulas.....	70
Basic Training		Input Devices: Can The Right Ones Prevent Pain?.....	58	Microsoft PowerPoint 7.0: Using AutoShapes.....	71
(games, help, deleting files and directories,		WordPerfect 6.1: Taking A Different View.....	60	Learn The Language Of The Web: HTML, Part III.....	72
passwords, screen savers).....	16	Lotus 1-2-3 4.0 For DOS:		Protect Your Investment	
Which Windows?.....	20	Freezing Rows & Columns.....	61	With A Case For Your Portable.....	76
Next Year's Tech Overload: A Survival Guide.....	23	PageMaker 6.01: Using Tabs.....	62	Get The Most 'Net For Your Dollar.....	78
Holiday Gift Guide: 50 Product Reviews.....	28	Microsoft Word 6.0:		Find It Online.....	80
Computing's Seven Deadly Sins.....	46	Navigational Aides.....	64	Changing The PC's Battery.....	82
		Word Pro 96: Using The WordPerfect SwitchKit.....	66	How To Safely Move Your PC.....	86

List Of Articles By Department

Article	Month	Page
PC Operating Instructions		
Using Arrow Keys To Check Commands In DOS	January.....	16
Navigating With Your Mouse In Windows 95	January.....	17
Tips For Windows 95: Getting Started	February.....	16
Making The Right Toolbar For The Job	February.....	19
Computer Communication:		
Serial Ports Let Your PC Talk To Its Peripherals	February.....	20
MSBACKUP Prevents Data Disasters	March.....	15
Juggling Windows	March.....	17
Managing Files In The DOS Directory	April.....	14
CTRL-ALT-DEL: It's Not Just for Reboots Anymore	May.....	15
Adding Fonts To Windows Applications	May.....	16
Dealing With DLLs	May.....	18
Customizing OS/2 Warp's LaunchPad	May.....	19
Deciphering DOS Error Messages	June.....	14
Installing & Configuring Windows 3.1	June.....	18
DEFRAK Fixes Hard Drive Clutter	July.....	14
Working With Windows 3.1 Program Groups	July.....	16
Making Windows 95 Easier On Your Eyes	July.....	17
Taking Screen Captures In OS/2 Warp	July.....	18
Config.sys Commands For Your Keyboard	August.....	14
Managing Temp Files	August.....	15
DOS' Internal And External Commands	September.....	12
Getting Organized With Windows Cardfile	September.....	13
Windows 95's Dual-boot Option	September.....	14
Sneak A Peek At Merlin	September.....	16
Finding Hidden System Files	October.....	16
Desktop Fine-tuning In Windows 3.1	October.....	17
Windows 95 And The PPP Connection	October.....	18
Using The DOS TYPE Command	November.....	15
Finding Missing Files In DOS	November.....	16
Customizing File Manager	November.....	18
Creating File Associations In Windows 3.x	November.....	20
Adding Notes To Windows 95 Help Files	November.....	21
Going Online With OS/2 Warp	November.....	22
Using The PATH Command	December.....	13
Installing Device Drivers In Windows	December.....	14
Basic Training		
(Checking memory, undelete, adjusting time and date,	January.....	18
checking file attributes or properties).....		
(Printing files, adding a program group/menu folder,	February.....	22
adding a program item/shortcut).....		
(Naming files, changing drives, changing directories,	March.....	18
freeing memory).....		
(Backing up files and changing your desktop's appearance).....	April.....	16
(Basic information, adding sounds to system events,		
editing system files).....	May.....	20
(Installing operating systems).....	June.....	20
(Utilities included with operating systems, changing		
keyboard settings, sizing and moving windows).....	July.....	20
(Installing a printer and printing).....	August.....	16
(Installing hardware).....	September.....	18

Article	Month	Page
(Checking drives for errors or defects,		
starting programs automatically at startup,	October.....	20
adjusting mouse settings).....		
(Virus protection and recovering deleted		
files and directories).....	November.....	24
(games, help, deleting files and directories,		
passwords, screen savers).....	December.....	16

Windows Computing

Drawing On Inspiration (art programs)	January.....	21
Boost Windows 95 With PowerToys	February.....	24
MS Business Pack Offers Ready-made Documents	March.....	20
Ward Off Infections Under Windows 95	March.....	21
Photodisc Software: How Do The Packages Differ?	April.....	18
Putting On A Different 'Face (unusual fonts)	May.....	22
Utilities Patch Windows 95 Faults	June.....	23
Get Your Fax Straight: PC As Fax Machine	July.....	23
Relational Databases Organize Complex Information	August.....	18
Flowcharting Software Offers The Power To Explain	September.....	20
Creating Web Pages The Easy Way (HTML editors)	October.....	22
First Aid Utilities Can Fix Your Ailing PC	November.....	26
Which Windows?	December.....	20

General Computing

Beyond Computer Literacy:		
Ten Technologies You Should Understand	January.....	26
What's Wrong With... MS Word For Windows	January.....	32
What's New With OS/2?	January.....	36
What's Wrong With... WordPerfect	February.....	28
Inoculate Your System Against Viruses	March.....	23
Cybercinema (movies and computers)	March.....	26
Understanding Graphics Accelerator Cards	April.....	24
Embedding Graphics In Documents	April.....	28
From Point Size To PostScript: The World Of Fonts	May.....	25
Improve PC Productivity Without Spending A Dime	June.....	28
Getting The Most Out Of Technical Support	June.....	38
Overboard With Options (system add-ons)	July.....	28
The Latest Color Inkjets Make A Splash	August.....	22
3-D Comes To Our Senses	August.....	26
Storage: It's Not Just Your Hard Drive Anymore	September.....	24
Campaigning On The Internet	September.....	31
Browsing For A Web Browser	October.....	26
Tools You Need To Create A Web Page	October.....	32
Technological Advances In Technical Support	November.....	33
Making Contact: Reaching Tech Support Is Half The Battle	November.....	38
All Aboard The New Bus	November.....	42
Next Year's Tech Overload: A Survival Guide	December.....	23
Holiday Gift Guide: 50 Product Reviews	December.....	28

Computing Basics

Computer Secrets Every Novice Should Know!	January.....	40
RAM: The PC's Memory Middleman	January.....	45
Diskettes: Your Portable Data Suitcase	February.....	30
The Bits & Bytes Of Computing	February.....	32
Name That Tone (computer sound)	March.....	32
A Look At Hard Drives	March.....	36

Article	Month	Page	Article	Month	Page
Demystifying The Magic Of PC Video	April	30	Technology Boot Camps	August	50
Choosing A Graphics File Format	April	34	Making Your Point With PowerPoint, Part I	August	52
Getting Started With Desktop Design	May	31	Upgrading From MS Works To MS Office	September	46
What To Do When PCs Won't Start	June	41	Making Your Point With PowerPoint, Part II	September	50
System Setup	July	31	Making Your Point With PowerPoint, Part III	October	48
COM Ports: How To Tell Which Is Being Used	July	34	Serve Yourself (Web servers)	October	52
Recordable CDs Make The Cut	August	30	How To Buy Spreadsheets	November	60
Creating And Printing Documents In Foreign Languages	August	34	Input Devices: Can The Right Ones Prevent Pain?	December	58
Why Good Hard Drives Go Bad—Or Do They?	September	33			
D5VD Modems Let Your Voice Be Heard!	September	36			
Internet 101: A Guide To Understanding 'Net Speak	October	34			
How The 'Net Works	October	38			
What You Should Know When Buying A New PC	November	44			
Chipping At The Pentium Mystique	November	50			
Computing's Seven Deadly Sins	December	46			
TSRs: Multitasking The DOS Way	December	48			

Windows Computing	
Putting Pictures In Your PC	January
Using Quicken: A Day-by-day Diary	February
Look Into Your Money's Future	
With Mortgage & Loan Programs	February
Software For The Couch Potato	February
Input Innovations	March
Turn Your PC Into A Photo Lab	April
Three Projects Using MS Publisher For Windows 95	May
Personalizing Your PC	June
5 Things That Make You Go Wow!	July
An Inside Look At Anatomy Software	July
Printing Out-of-the-ordinary Projects	August
Banking Online: How Safe Is Your Money?	September
Families Go Online	October
Where To Buy?	November
Your Guide To The Holiday Consumer PCs	December

Working At Home	
Jack Of All Tasks (multifunction devices)	January
Quick Fix: The Quick Fix For Your Finances	February
Quicken's Associates	February
How Much Computer Do You Really Need?	March
Networking Your Home PCs	April
Creating Simple Printer-sharing Schemes	April
Scanners Turn Documents Into Digital Data	April
Desktop Publishing: It's Easy, But It Still Takes A Brain	May
Printing With Specialty Papers	May
Making The Link Between Telephones And Computers	June
Be Two Places At Once With Remote Computing	July
Creating Your Own Business Forms	August
How To Print Envelopes	August
ISDN Speeds Online Access	August
Presentation Software: From Boardrooms To Web Pages	September
Widening Your Route To The Internet	September
Tips For Buying & Using High-speed Modems	October
Equipping The Home Office	November
Choosing Between Business & Family PCs	December

At The Office	
Becoming A Pro With Word Pro: Part I	January
PassageWay Links Computers & Telephones	January
Becoming A Pro With Word Pro: Part II	February
Becoming A Pro With Word Pro: Part III	March
Unhappy New Year (year 2000 problem)	March
Introducing PageMaker 6.0 For Windows 95: Part I	April
Organizing Your Graphics	April
PageMaker For Windows 95: Part II	May
Electronic Signatures Put The Cap On Pens	May
PageMaker For Windows 95: Part III	June
Creating Small-office Intranets	June
Auditing Accounting Software	July

Quick Studies	
Microsoft Excel 5.0	
Creating Expense Reports	January
Introduction To Formulas	February
Using Formulas In Expense Reports	March
Using Borders & Patterns	April
List Management	May
Function Wizard	June
Using Templates, Part I	July
Using Sheet & Workbook Autotemplates	August
Locating & Replacing Data	September
Basic Printing Tools	October
Using Page Setup	November
Using Financial Formulas	December
PageMaker 5.0	
Creating Basic Flyers	January
Creating Multiple-page Flyers	February
Producing Simple Graphics	March
Control Palette	July
Scaling & Cropping Graphics	August
Setting Paragraph Specifications	September
PageMaker 6.0	
Using The PageBars Add-on	October
PageMaker 6.0i	
Using Keystroke Shortcuts	November
Using Tabs	December
Quicken Deluxe 5.0	
Customizing Quicken	January
Scheduling Recurring Payments	February
Managing A Household Budget	March
Recording Transactions	April
Financial Planning Tools	May
Online Banking	June
Using The Deluxe Gateway	July
Managing Multiple Accounts	August
Managing Investments Online	September
Tracking Investment News	October
Balancing The Checkbook Register	November
Printing Checks	December
Lotus 1-2-3 4.0 For DOS	
Relative & Absolute Cell References	January
Looping Macros	August
Enhancing Graph Displays	November
Freezing Rows & Columns	December
Lotus 1-2-3 5.0 For Windows	
Linking Data To Geographic Maps	February
Resizing Columns & Rows	March
Backsolver Simplifies What-if Analysis	April
Gallery Styles	May
Setting Worksheet Defaults	June
Adding Graphics	September
Protecting & Hiding Data	October
Quattro Pro 6.0:	
Importing & Exporting Files	January
Protecting Spreadsheets With Data Security Features	March
Creating Your Own Macros	April
Creating Your First Graph	May
Creating Slide Shows	June
Customizing Notebook Settings	July
Increasing Efficiency With Experts	August
@DATE Functions	September

Article	Month	Page	Article	Month	Page
Sizing Rows & Columns	November	63	PDAs:		
Working With Text	December	67	Personal Digital Assistants Or Powerless Desktop Aspirants?	July	70
Microsoft Word 6.0			Wireless Computing Increases The Price Of Freedom	July	73
Importing Print Shop Graphics	January	65	Hard Copies On The Road	August	70
Generating Mailing Labels	February	55	Ruggedized Portables Go Where Others Fear To Compute	September	69
Customizing Documents With Sections	March	58	Docking Stations: A Place To Put Your Notebook	October	68
Creating A Data Source For Mail Merges	April	61	Hands Off: Protecting Portable Computers From Thieves	November	76
Creating Custom Dictionaries	May	55	Protect Your Investment With A Case For Your Portable	December	76
Calculating Formulas In Expense Reports	June	62			
Merging Form Letters & Data Source	July	57			
AutoCorrect & AutoText	August	58			
Formatting Basics	September	54			
Navigational Aides	December	64			
Microsoft Word 7.0					
Getting Started With Internet Assistant	October	59			
Creating Web Pages With Internet Word Assistant	November	70			
WordPerfect 6.0/6.1					
Working With Multiple Documents	January	66			
Working With TextArt	March	61			
Creating & Using Hypertext Links	April	62			
Expanding Abbreviated Text	May	57			
Saving Time With Tab Settings	June	60			
Text Styles, Part I	July	55			
Text Styles, Part II	August	59			
Inserting Sound Clips	September	62			
Adding Watermarks To Documents	October	60			
Taking A Different View	December	60			
WordPerfect 5.1 For DOS					
Graphics Options	November	71			
Word Pro 96					
Creating Headers & Footers	April	59			
Using Bookmarks	May	60			
Creating An Index	June	63			
Drawing Tools	July	58			
Using Find & Replace	August	56			
Versioning	September	58			
Comparing Documents With TeamConsolidate	October	58			
Working With Tabs	November	62			
Using The WordPerfect SwitchKit	December	66			
Microsoft PowerPoint 7.0					
Using Outline View	November	69			
Using AutoShapes	December	71			

Beyond The Basics

How To Install RAM	January	68
Fake RAM: Does It Fulfill Real RAM Promises?	January	71
Of Mice & Pens: Installing Input Devices	February	60
Using Ansysys	February	64
Upgrading Your Flash BIOS For Plug And Play	March	65
Having It Your Way Using DOS Batch Files	March	68
Improve Your Image (video settings)	April	64
Cleaning Disks With FORMAT	April	68
Installing A Touch Screen	May	62
So, You Want To Be A Programmer?	June	69
How To Build A PC, Part I	July	61
Intel's MMX Boosts Multimedia	July	66
How To Build A PC, Part II	August	64
The Config.sys File: What Does It Do?	September	64
Learn The Language Of The Web: HTML, Part I	October	64
Learn The Language Of The Web: HTML, Part II	November	72
Learn The Language Of The Web: HTML, Part III	December	72

Mobile Computing

Definitions 101 For Portable PC Users	January	75
Notebook Computers: Data On The Go	February	68
New PC Cards Keep Portables Connected	March	72
Upgrading Your Portable's Hard Drive	April	72
Bigger Is Better (portable PC market update)	May	65
Turning A Notebook Into A Multimedia System	June	71

Plugged In

Local BBSes Give Down-home News	January	76
Find It Online	January	78
Managing Your Money With A Modem	February	70
Maximum Return: Track Your Investments With A PC	February	74
Find It Online	February	79
Java Buzz Flows Through Web World	March	75
A Map To The Internet	March	78
Find It Online	March	80
Racing To The 'Net	April	74
Olympic Torch Burns Online	April	78
Find It Online	April	80
Publishing Without Paper	May	68
Who Owns The Information?	May	73
Find It Online	May	75
Tie-In To The 'Net	June	75
Find It Online	June	79
'Net Boxes Start To Emerge	July	76
Find It Online	July	80
Finding Folks Through The 'Net	August	74
The Hangups Of Videophones	August	78
Find It Online	August	80
Will Multiplayer Games Make A Net Kalling Online?	September	72
Internet Video: Will It Muscle Into Prime Time?	September	76
Find It Online	September	78
Making The Best Use Of The 'Net	October	70
'Net Threats	October	74
Internet Search Services Show The Way	October	77
Internet Relay Chat Offers Worldwide Conversations	October	80
Find It Online	October	83
News On The 'Net	November	79
Find It Online	November	84
Get The Most 'Net For Your Dollar	December	78
Find It Online	December	80

Your Old PC

Buying And Selling Old Computers	May	76
Kicking Your CPU Up A Notch	June	80
Joining Forces With A Computer User Group	July	81
Is Your Image Safe With Dot Matrix?	August	81
Upgrading To Multimedia	September	80
Taking An 8088 Online	October	84
Extra Trunk Space For The 386	November	86
Changing The PC's Battery	December	82

Tidbits

Cutting Through The Runaround (tech support)	January	80
Deciphering Hard Drive Jargon	February	80
Let's Go Internet	March	81
Downloading And Viewing Images	April	81
Fine-tuning Your CD-ROM Drive's Performance	May	78
Keyboard Tips & Tricks	June	82
You Can Take It With You (portable peripherals)	July	83
Behind The Wheel Of Device Drivers	August	83
On And Off With Ease	September	82
A Profile Of The Internet And Online Services	October	88
The Art Of Uploading & Downloading	November	89
How To Safely Move Your PC	December	86

BACK ISSUES & REFERENCE BINDERS



BACK ISSUES

1995 Monthly Issues*

___ January ___ August
 ___ April ___ September
 ___ May ___ October
 ___ June ___ November
 ___ July ___ December

1996 Monthly Issues*

___ January ___ August
 ___ March ___ September
 ___ April ___ October
 ___ June ___ November
 ___ July ___ July

* All back issues are available for \$7.95 each (includes sht).
(Add \$20 to your total for all overseas shipments)

BINDERS



Protect your investment with a *PC NOVICE* embossed binder and start building your reference library today.

Each binder holds 12 issues, and there's no need to punch holes! Removable metal spines let you view the issues easily while in the binder or rearrange them for your convenience.

___ PC NOVICE BINDER(S) \$12.95 each

SUBSCRIPTIONS

SAVE 42% OFF THE COVER PRICE!
PC NOVICE

- ☐ 1 year \$29
- ☐ 2 years \$48
- BEST DEAL!**
- ☐ 3 years \$64

Outside U.S. \$49/yr.
Airtel (Canada/Mexico \$37/yr.)
* Payable in U.S. funds
* Allow 10 days for delivery

TO ORDER CALL

1-800-367-7333

OR MAIL THIS FORM TO:

PC NOVICE

P.O. BOX 82511

LINCOLN, NE 68501-2511

ATTN: BACK ISSUES

Please Print:

Name: _____

Company Name (if using business address): _____

Address: _____

City: _____

State: _____

ZIP: _____

Phone: _____

☐ Payment Enclosed

0423

Please bill my:

- ☐ Visa ☐ MasterCard
- ☐ AmEx ☐ Discover

Acct. #: _____

Expiration Date: _____

Signature: _____

(All orders must include payment in full or credit card information)

All orders must include payment in full or credit card information

GLOSSARY

Of Terms

Autoexec.bat—A special file containing instructions that are carried out every time the computer system is started or restarted. These instructions help the computer get set up and find certain programs.

Avatar—In virtual chat worlds on the Internet, these are the character bodies that users take on to walk around and talk to other users. Avatars may be cartoonish, or they may appear like something out of a science-fiction story.

Back Up—The process of copying all important information and system files from your PC's hard drive to diskettes or tape. Users always should back up data before making any changes to important system files, such as Autoexec.bat.

Bandwidth—The amount of data that can be transferred over a communications line in a certain amount of time.

BIOS—Basic Input/Output System. A set of routines stored in read-only memory (ROM) that work with a computer system's hardware to support data transfers among the various elements of a system, such as the monitor or diskette drive.

CMOS—Complimentary Metal-oxide Semiconductor. Consists of two field transistors contained on a silicon chip that are high-speed, low-power-consuming devices generally used for RAM and switching applications.

Config.sys—A text file DOS consults at system startup. This file contains commands that tell DOS how to communicate with new hardware, customize communications with existing hardware, or adjust the computer's memory usage.

CPU—Central Processing Unit. The "brain" of the computer. The type of CPU, or microprocessor, that a computer has determines what type of system it is. 80386, 80486, and the Pentium are all processor chips, or CPUs.

DSVD—Digital Simultaneous Voice and Data. These types of modems can transmit both data and sound over a telephone line at one time, as opposed to ordinary modems that only allow data transmission. These modems split the transmission, so two-thirds is used for data, and one-third is used for voice. Both users must have DSVD modems for this technology to work, however.

DVD—Digital Video Disc. A new type of storage technology for high-density discs that can hold from 4.7GB to 17GB of information. A DVD disc can, for example, store a full-length film.

GB—Gigabyte. A unit of computer storage equaling approximately one billion bytes.

Kbps—Kilobits Per Second. A unit of measurement for modems that indicates the speed at which data is transferred over phone lines. One kilobit is equal to approximately 1,000 bits.

KBps—Kilobytes Per Second. A unit of measurement used to indicate the speed at which data is transferred to the computer from a CD-ROM drive. One kilobyte is equal to approximately 1,000 bytes.

MB—Megabyte. A unit of computer storage equaling about one million bytes.

MHz—Megahertz. Used to measure a computer system's speed, one megahertz is equivalent to 1 million cycles per second.

Modem—MOdulator/DEModulator. A device that lets a PC communicate and exchange information with other modem-equipped computers via telephone lines. Modems take a computer's digital signal and change it to an analog signal that can be sent over a phone line and vice versa.

PARK—A DOS command that's used to park the read/write heads on the hard drives of older computer systems before the system is moved.

POST—Power-on Self-test. A diagnostic tool used by DOS that checks that all of the ports and peripherals on your system are working correctly. The POST happens each time your PC is turned on.

RAM—Random-access Memory. The temporary memory storage area used to load program instructions and store files currently in use. Unless a file is permanently stored on a hard drive, diskette, or other storage medium, changes to information stored in RAM will be lost when the computer is turned off.

SIMM—Single In-line Memory Module. Small circuit boards that accommodate memory chips. Smaller than traditional memory hardware, these boards use less space on the motherboard.

USB—Universal Serial Bus. A new hardware bus standard that will allow users to plug a peripheral into a USB port, and it will be automatically configured and ready for use. With this technology, users won't have to worry about setting interrupt request lines and other switches because USB detects when peripherals are added and removed. USB peripherals are expected to be available in late 1996 or early 1997.

VRML—Virtual Reality Modeling Language. A standardized code that describes three-dimensional (3-D) shapes to your World Wide Web browser.

VRAM—Video Random-access Memory. Memory that helps normal RAM process memory-hungry video images.

Wavetable Synthesis—A sound technology that's a little more expensive, but is preferred by musicians and other sound enthusiasts because of the high-quality playback it produces, when compared to ordinary FM synthesis. Because it plays back digital instrument samples, the sounds are more realistic than FM synthesis can produce.

Everybody's Adding On

A Spate Of PCs Offer Gadgets, But How Many Offer True Innovation?

Humor columnist Dave Barry recently wrote about how easy it is to spot a real rebel on the streets. The real outsiders, Barry says, ride Harley-Davidson motorcycles and always wear the jeans, boots, and bandanna worn by about 28 million other individualistic loners on Harleys.

As we stood in our hardware testing lab this month, Barry's comments kept coming to mind. The new computers rolled out for the holiday season weren't the traditional beige boxes that seemed suited to laboratory life and users with pocket protectors. This year, our holiday reviewers were treated to stylish machines festooned with funky buttons and eye-catching color schemes. Almost every one of these new PCs proposed to change how consumers look at computing. What made us so sure, you may be asking, that these were really groundbreaking designs? Well, because they looked a lot like the groundbreaking PCs around them. The details weren't all identical, but taken as a whole, they're all marching to the same drummer.

There's the black IBM Aptiva, which stealthily hides its system unit under the desk, leaving only a speaker-festooned monitor and vital controls on the desktop. Compaq's curvaceous Presario is loaded with buttons. There are CD player controls, telephone answering system controls, and a clear button with a moon face that looks like the guy from McDonald's old "Mac Tonight" ads. Packard Bell's Platinum includes a similar (except for Mr. Moon) button array under its monitor. And then there's Acer's Aspire, whose curvy monitor sports a telephone receiver and more holes than a roadside STOP sign. In short, you'll probably find every consumer electronics accessory stuck somewhere on these PCs in true Mr. Potato Head style.

Then there's the Gateway Destination, which was seemingly assembled by a loopy Best Buy clerk. This behemoth includes a 31-inch monitor, television receiver, stereo receiver, and cordless keyboard. After Destination owners watch the big game on the big screen, the whole gang can hang around for some big word processing.

The new looks of these PCs have a few distinct traits, but, in general, uniqueness isn't one of them. Introducing a funky PC is about as original as taking up the Macarena.

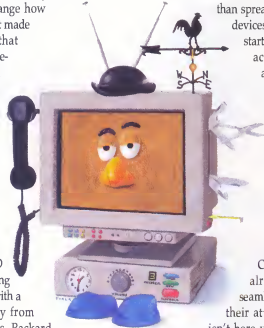
Yet manufacturers are racing to eradicate bland color schemes and right angles in new computers. Why? A changed marketplace could be one major impetus behind this rush to hipness. Home PC ownership is currently at 36%, according to an Odyssey Homefront study; that's statistically unchanged from 35% six months ago. Furthermore, a Dataquest study reveals, only 26% of users who said they planned to purchase their first PCs last year actually followed through and bought one.

These numbers indicate that the folks who consider computers a necessary tool probably already own one. Thus, we get the new systems that are the first steps toward a likely future in which computing encompasses more than spreadsheets and word processors. The devices rolled out for Christmas '96 have started us toward the day when we'll access telephone, online, banking, and entertainment services through a highly versatile cousin of today's computers.

But the glamour systems currently in our testing lab are just one small step for computers, not a giant leap for computerkind. Sure, it's cool to use the PC as an answering machine, but what's wrong with the answering machine you already bought? The same goes for the CD player and even television you already own. *Someday* we'll move seamlessly between TV programs and their attendant Web sites. But that day isn't here yet. Our staff was frequently divided on whether certain features were cheesy add-ons or great ideas. A really smart idea would gain more universal support.

It's also hard to get excited about the latest PCs because there's just so darn many of them chasing the same dream. A few ideas, such as Gateway's Destination and IBM's clever hiding of the system unit, stand out. But manufacturers should know that you can't revolutionize thinking when your system's main attraction is that the big volume dial is on the left of the CD controls instead of the right.

New systems have stepped to a different kind of computing. The problem is that the step is crowded, and it may not even be a significant one. Alone, none of these PCs will start a revolution, but together, they point to where we may someday arrive. ■



"My Fifteen
Employees
Act Like 500.
And We
Make More
Money, Too."

James McAuliffe

Culpepper, McAuliffe
and Meaders, Inc.
Architecture and Interior Design



"When I heard about the new Hayes™ Office Communications Manager Modem, I knew this was the communications solution for me. It comes with three integrated software packages worth \$217! It gives us a professional voice mail system with up to 1,000 custom mailboxes and 28,800 bits per second performance. I can switch from data to voice on the same phone call, and it allows me to keep my hands free with its full-duplex speakerphone. It even has

automatic pager notification.

We may be a small firm, but with Hayes, we can certainly act like the big guys. And make more money too!"

\$20 Rebate Coupon

Complete this coupon and mail it with a copy of your dated sales receipt and modem UPC/Proof of Purchase to:

Hayes ACCURA Rebate,
P.O. Box 3120, New York, NY 10116-3120

Name

Title

Company

Address

City State Zip

Phone

Fax

Modem must be purchased between September 1, 1996 and January 31, 1997 to qualify for rebate. Rebate must be received by Hayes by February 20, 1997. © Hayes Microcomputer Products, Inc. All rights reserved. Offer valid in U.S. and Canada only and void where prohibited by law. Offer subject to rebate instructions and product availability. Limit one rebate per customer. Not valid with any other offer. Please keep copies of all materials submitted. Allow 6-8 weeks for delivery of rebate check. Call Hayes Online: 770-446-6336. Hayes Worldwide Web Site: <http://www.hayes.com> or Telnet to "hayes.com". ©1996 Hayes Microcomputer Products, Inc. P.O. Box 10520 Atlanta, GA 30348. Hayes, the Hayes icon and the Hayes logo are registered trademarks, and ACCURA and Smartcom are trademarks of Hayes Microcomputer Products, Inc. Other trademarks and registration marks are those of their respective companies.



Hayes
The Inventor
Of The PC Modem.

